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31 January 2014
File No. 39770-001

California Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, California 94612

Attention: Mr. Max Shahbazian, PG

Subject: 2013 Annual Groundwater Monitoring Report
915 DeGuigne Drive
Sunnyvale, California

Dear Mr. Shahbazian:

Please find enclosed the subject report prepared by Haley & Aldrich, Inc., on behalf of Advanced Micro Devices, Inc. (AMD). This report documents the results of the 2013 annual groundwater monitoring program for the former AMD facility located at 915 DeGuigne Drive, in Sunnyvale, California.

This report addresses the results and interpretation of the October/November 2013 sampling event conducted in accordance with Site Cleanup Requirements Order 91-101 and the sampling plan submitted in August 1999.

Please feel free to call the undersigned if you have questions regarding this report.

Sincerely yours,
HALEY & ALDRICH, INC.

Michael Calhoun, PG, CHG
Senior Technical Specialist

Peter Bennett, PG, CHG
Vice President and Lead Hydrogeologist

c: Advanced Micro Devices, Inc.; Attn: Mr. Brett Stringer
Advanced Micro Devices, Inc.; Attn: Mr. Do Cao
City of Sunnyvale; Attn: Mr. Ron Staricha
Santa Clara Valley Water District; Attn: Mr. George Cook
United States Environmental Protection Agency; Attn: Ms. Melanie Morash

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2013 ANNUAL GROUNDWATER MONIGORING REPORT
915 DEGUIGNE DRIVE
SUNNYVALE, CALIFORNIA

by

Haley & Aldrich, Inc.
Oakland, California

for

Advanced Micro Devices, Inc.
Sunnyvale, California

File No. 39770-001
31 January 2014

HALEY & ALDRICH

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LIST OF ACRONYMS AND ABBREVIATIONS

Acronym	Description
1,2,3-TCB	1,2,3-trichlorobenzene
1,2,4-TCB	1,2,4-trichlorobenzene
AMD	Advanced Micro Devices, Inc.
AMEC	AMEC Geomatrix, Inc. / AMEC Environment & Infrastructure
cDCE	cis-1,2-dichloroethene
COCs	chemicals of concern
EPA	United States Environmental Protection Agency
Freon 113	1,1,2-trichloro-1,2,2-trifluoroethane
FSI	Field Solutions, Inc.
GAC	granular activated carbon
Geomatrix	Geomatrix Consultants, Inc.
gpd	gallons per day
μg/L	micrograms per liter
Haley & Aldrich	Haley & Aldrich, Inc.
MS/MSD	matrix spike/matrix spike duplicate
NPDES	National Pollutant Discharge Elimination System
PCE	tetrachloroethene
Permit	General NPDES Permit No. CAG912003
QA/QC	quality assurance/quality control
RPD	relative percent difference
Site	Former AMD Facility Located at 915 DeGuigne Drive
TCE	trichloroethene
tDCE	trans-1,2-dichloroethene
the Order	Site Cleanup Requirements Order Number 91-101
VOC	volatile organic compound
Water Board	California Regional Water Quality Control Board, San Francisco Bay Region

1. INTRODUCTION

This report documents the results of the 2013 annual groundwater monitoring program for the former Advanced Micro Devices, Inc. (AMD) facility located at 915 DeGuigne Drive, in Sunnyvale, California ([Site]; Figures 1 and 2). The report was prepared for AMD by Haley & Aldrich, Inc. (Haley & Aldrich).

AMD operated a semiconductor fabrication and research and development facility at the Site from 1974 until 2003, when AMD transferred ownership of the property to Spansion LLC, a joint venture of Fujitsu and AMD. In December 2005, Spansion LLC became Spansion, Inc., an entity independent from AMD specializing in flash memory devices. In 2009, Spansion, Inc. stopped manufacturing activities at the Site. Spansion, Inc. is currently in escrow to sell the property to a developer. The monitoring activities described in this report were completed in accordance with Site Cleanup Requirements Order Number 91-101 (the Order) issued on 19 June 1991, by the California Regional Water Quality Control Board, San Francisco Bay Region (Water Board).

1.1 Report Organization

Section 2 describes the procedures, results, and conclusions of the 2013 annual groundwater monitoring event; Section 3 summarizes the remedial measures implemented during 2013; Section 4 provides a discussion of the groundwater analytical results; and Section 5 presents conclusions based upon the activities performed during 2013.

1.2 Site Activities and Events in 2013

Activities completed on behalf of AMD in 2013 included:

- Routine treatment system sampling and maintenance; and
- Annual groundwater sampling of Site monitoring and extraction wells.

2. 2013 ANNUAL GROUNDWATER MONITORING

The 2013 annual groundwater monitoring event was conducted in October and November 2013 in accordance with the approved sampling plan (AMD, 1999).

This report includes the following information consistent with the requirements of the Order:

- A description of Site activities that have occurred since the submission of the 2012 annual report.
- A Site plan (Figure 2).
- Potentiometric maps of the A, B1, and B2 water-bearing zones for the 14 October 2013 water level monitoring event (Figures 3 through 5).
- Isoconcentration contour maps for the volatile organic compounds (VOCs) trichloroethene (TCE) and cis-1,2-dichloroethene (cDCE), the main chemicals of concern (COCs), for three designated groundwater zones (A, B1, and B2 Zones; Figures 6 through 11). The contours are based on the analytical results for groundwater samples collected from Site wells in October and November 2013, as well as the results of Hydropunch™ groundwater samples collected as part of an additional Site investigation in November 2007, as reported in the Subsurface Investigation Report (Geomatrix Consultants, Inc. [Geomatrix], 2008).
- Groundwater level measurements and analytical results for Site monitoring and extraction wells sampled during the October and November 2013 groundwater monitoring event (Tables I and II, respectively).
- Groundwater extraction volumes for onsite extraction wells in 2013 (Table III).
- Historical and annual estimates of the mass of chemicals removed from groundwater by Site extraction wells (Tables IV and V).
- Historical TCE, cDCE, and total VOC concentrations (Appendix A) presented in tabular format.
- A photographic log of sampling procedures is included in Appendix B.
- A summary of quality assurance/ quality control (QA/QC) data is included in Appendix C.
- Concentration trends for A-, B1-, and B2-Zone monitoring wells are included in Appendix D.

Historical groundwater elevation data, certified analytical laboratory reports, chain-of-custody records, and analytical results from adjacent sites (901/902 Thompson Place, 811 East Arques Avenue, 825 Stewart Drive, and 932 Kifer Road/974 East Arques Avenue) are included in the "2013 Annual Groundwater Monitoring Data Report" (on file at AMD). Analytical laboratory data for the Site is also uploaded to the State's Geotracker database.

2.1 Monitoring Procedures

Groundwater monitoring activities were conducted on behalf of AMD by Field Solutions, Inc. (FSI), a groundwater sampling company based in San Jose, California.

Water levels in Site monitoring wells were measured on 14 October 2013, and groundwater samples were collected between 30 October 2013 and 8 November 2013. Wells were purged prior to sample collection until temperature, pH, and specific conductance measurements had stabilized and a minimum of approximately three casing volumes were removed. Three blind duplicates and five equipment blanks were collected for QA/QC purposes in addition to the groundwater samples.

Samples were analyzed for chlorinated VOCs using United States Environmental Protection Agency (EPA) Method 8260B. Samples were analyzed by Curtis & Tompkins, Ltd. (C&T), of Berkeley, California, a California certified laboratory. Purge water was discharged into the Site groundwater treatment system.

2.2 Groundwater Elevation Data

Water levels measured on 14 October 2013 are summarized in Table I. Interpretations of the potentiometric surfaces for the A, B1, and B2 Zones are shown in Figures 3 through 5. Water level elevations for monitoring wells were calculated from the measured water level depths subtracted from the surveyed top of well casing elevations. Calculated groundwater elevations for water levels measured in October 2013 ranged from 23.48 to 29.93 feet relative to the North American Vertical Datum of 1988 (NAVD88) in A-Zone wells, from 23.14 to 29.96 feet NAVD88 in B1-Zone wells, from 16.62 to 26.96 feet NAVD88 in B2-Zone wells, and 27.85 feet NAVD88 in B3-Zone well 50-DDD. In general, water levels measured in October 2013 were consistent with those measured in October 2012.

As illustrated in Figures 3 through 5, the approximate direction of the horizontal hydraulic gradient is generally north-northeast in the A and B1 Zones, and northeast in the B2 Zone. At locations where water levels were measured for well pairs representing multiple depth intervals, the direction of calculated vertical hydraulic gradients were generally upwards, except in the vicinity of the active extraction wells north of the main building, where vertical hydraulic gradients were downwards due to pumping.

2.3 Analytical Results

COC concentrations reported for groundwater samples collected during the 2013 monitoring event are summarized in Table II. COCs detected in groundwater samples collected at the Site include tetrachloroethene (PCE), TCE, cDCE, trans-1,2-dichloroethene (tDCE), vinyl chloride (VC), 1,1-dichloroethene, Freon 113, 1,1,1-trichloroethane (1,1,1-TCA), 1,1-dichloroethane, 1,2,4-trichlorobenzene (1,2,4-TCB), and 1,2,3-trichlorobenzene (1,2,3-TCB). Of these, TCE, cDCE, VC, and 1,2,4-TCB were reported as present in Site groundwater samples above their respective groundwater cleanup goals set by the Order. TCE and cDCE were most commonly reported in groundwater samples and were generally present at higher concentrations compared to other VOCs detected. Isoconcentration contours for the occurrence and distribution of TCE and cDCE detected in groundwater samples collected from monitoring wells during the 2013 annual monitoring event are presented on Figures 6 through 8 and Figures 9 through 11, respectively, for the A, B1, and B2 Zones. A discussion of the analytical results and conclusions are presented in Sections 4 and 5 of this report, respectively.

2.4 Quality Assurance / Quality Control

Laboratory analytical data were reviewed in accordance with the National Functional Guidelines for Superfund Organic Methods Data Review (USEPA, 2008). A summary of QA/QC data is presented in Appendix C.

Overall, the results of the laboratory quality control sample analyses indicate that the test results in this report are of sufficient quality to support the conclusions presented, and the results are considered to be valid and usable.

3. REMEDIAL MEASURES

3.1 Groundwater Extraction

Extraction well data and average pumping rates for the period 3 January 2013 to 3 January 2014 are summarized in Table III. During this time period, approximately 35 million gallons of groundwater were extracted from the A, B1, and B2 Zones. The calculated average pumping rate for this period was approximately 109,600 gallons per day (gpd) or 76.1 gallons per minute (gpm), including approximately 28,400 gpd (19.7 gpm) from the A-Zone basement dewatering sumps (Sumps 1-4 and BS-6), approximately 61,200 gpd (42.5 gpm) from A/B1-Zone wells EW-1 through EW-6 (except well EW-3, which was not in operation), and approximately 20,000 gpd (13.9 gpm) from B2-Zone wells EW-7 through EW-9.

Well EW-3 was not in operation in 2013; it was turned off in 2006 because of its very low yield (0.05 gallons per minute [gpm] average extraction rate) and low COC concentrations (less than 2 micrograms per liter [μg/L]; Geomatrix, 2006).

3.2 Groundwater Extraction and Treatment System Maintenance

On behalf of AMD, FSI performed routine operation and maintenance of the groundwater extraction and treatment system and collected monthly samples in accordance with the requirements of the RWQCB-issued General National Pollutant Discharge Elimination System (NPDES) Permit No. CAG912003 (Permit), Order No. R2-2009-0059 (RWQCB, 2009). In accordance with the Permit, Haley & Aldrich prepared and submitted NPDES quarterly reports on behalf of AMD.

The groundwater treatment system consists of a 3,000 gallon feed tank, a primary system consisting of three 2,000-lb granular activated carbon (GAC) vessels in series, and a backup system consisting of two air strippers. Groundwater was treated during the reporting period through the primary system except during six of the carbon changeouts. The backup air stripper system operated for a 24-hour period while the virgin carbon was soaking on: 1 and 2 May 2013, 31 May and 1 June 2013, 23 and 24 July 2013, 5 and 6 September 2013, 1 and 2 October 2013, and 10 and 11 December 2013. Fourteen gallons of scale inhibitor chemical were added to the treatment process when the air strippers were in operation to inhibit the precipitation of scale and manganese on treatment system piping and equipment.

The groundwater treatment system operated in compliance with the requirements of the Permit throughout the reporting period.

3.3 Status of Chemicals Removed in 2013

Approximately 49 pounds of COCs were removed in 2013 (Table IV) at a bulk removal rate of approximately 1.4 pounds per million gallons of water extracted. This is similar to the 2012 bulk removal rate of 1.6 pounds per million gallons of water (AMEC Environment & Infrastructure, Inc. [AMEC], 2013). The estimated mass of COCs removed during 2013 is based on the volume of extracted groundwater treated by the system for each calendar quarter multiplied by the quarterly average of monthly COC concentrations reported for water samples collected from the combined influent stream to the groundwater treatment system. Approximately 5,715 pounds of COCs were removed from 1982 through 2013 (Table IV).

Table V summarizes the COC mass removal rates for all of the extraction wells and basement dewatering sumps (Sumps 1-4 and BS-6). These calculations were based on October and November 2013 COC concentrations (Table II) for individual wells and the corresponding annual average extraction rates provided in Table III. Because groundwater extraction rates change seasonally, COC concentrations and mass removal rates are subject to variability, and these calculations may vary for different sampling times and averaging periods. Approximately 92 percent of the total COC mass reported as removed from the A, B1, and B2 Zones appears to be from the shallower extraction wells (A/B1-Zone wells EW-1 through EW-6 and the basement dewatering sumps); with the deeper B2-Zone extraction wells (EW-7 through EW-9) providing approximately 8 percent of the total VOC mass removed.

A substantial portion of the total TCE and cDCE mass removed by the extraction wells and basement dewatering sumps can be attributed to off-Site sources. This is demonstrated by the COC removal rate from basement sump BS-6, which appears to extract groundwater affected by the Mohawk plume. In addition, A/B1-Zone extraction well EW-4 has been shown to extract COC-affected groundwater (TCE and cDCE) that appears to be derived primarily from an off-Site, upgradient release (AMEC, 2008; Geomatrix, 2008). Off-Site sources are further discussed in Section 4.

4. DISCUSSION OF ANALYTICAL RESULTS

Samples from 17 of the 27 Site monitoring wells sampled in October and November 2013 were reported to have concentrations of TCE above the cleanup goal of 5 μg/L, and 17 of the 27 Site monitoring wells sampled had cDCE concentrations above the cleanup goal of 6 μg/L. Concentrations of these primary COCs detected in groundwater samples from most A-, B1-, and B2-Zone monitoring wells during the 2013 monitoring event generally were stable (i.e., had a RPD of less than or equal to 25 percent from 2012 results). The concentrations detected in 2013 are generally consistent with a long-term decreasing trend. To simplify discussion of analytical results, the Site is divided into western, central, and eastern portions because of the presence of off-Site influences to Site groundwater.

Concentration trends for A-, B1-, and B2-Zone monitoring wells are included in Appendix D.

4.1 Western Portion of Site

For the 10 wells located on the western portion of the Site, concentrations of TCE in groundwater samples decreased in one well (43-DD), increased in one well (41-D), and remained stable in eight wells (2-S, 40-S, 41-S, 49-S, 10-D, 40-D, 49-D, and 49-DD). Concentrations of cDCE increased in two wells (49-S and 40-D) and remained stable in eight wells (2-S, 40-S, 41-S, 10-D, 41-D, 49-D. 43-DD, and 49-DD). In general, TCE is detected at higher concentrations than cDCE in the western portion of the Site (well 10-D being the one exception). An upgradient, offsite source is a likely explanation for TCE and cDCE reported in groundwater samples from wells located near the western property boundary, as these wells are hydraulically upgradient or cross-gradient of the former on-Site source area (AMEC, 2008; Geomatrix, 2008).

4.2 Central Portion of Site

For the 13 wells located in the central portion of the Site, the concentrations of TCE in groundwater samples decreased in two wells (11-DD and 20-DD), increased in four wells (19-S, 19-D, 18-DD, and 42-DD), and remained stable in seven wells (8-S, 11-S, 18-S, 20-D, 32-DD, 45-DD, and 50-DD). Concentrations of cDCE decreased in one well (20-D), increased in three wells (8-S, 11-DD, and 18-DD), and remained stable in nine wells (11-S, 18-S, 19-S, 19-D, 20-DD, 32-DD, 42-DD, 45-DD, and 50-DDD).

4.3 Eastern Portion of Site

For the four wells located in the eastern portion of the Site (1-S, 3-S, 31-S, and 51-D), the concentrations of TCE remained stable in all wells. The concentration of cDCE increased in one well (3-S) and remained stable in the rest. In general, cDCE is detected at higher concentrations than TCE in samples collected from wells in the eastern portion of the Site. Groundwater quality beneath the eastern portion of the Site has reportedly been influenced by an upgradient release (referred to as the "Mohawk plume"). A groundwater plume of cDCE and lower concentrations of other COCs including TCE, has been mapped from the Mohawk Laboratories site, which is located approximately 4,800 feet south (hydraulically upgradient) of the Site (The Source Group, Inc., 2005). Concentrations of cDCE in groundwater samples from offsite A-Zone wells to the south of 915 DeGuigne Drive were 79 and 130 μg/L at "Mohawk" wells NMW-09 and MW-09, respectively, for samples collected on 30 October 2013. On-Site, A-Zone well 31-S, located hydraulically downgradient of MW-09 and hydraulically cross-gradient of the former on-Site source area, reported cDCE at a similar concentration of 86 μg/L

(Figure 9). A Hydropunch™ groundwater sample collected from a depth of approximately 20 feet below ground surface near the southeast corner of the onsite building in November 2007 contained cDCE at a concentration of 340 μg/L; this is additional evidence for the presence of the Mohawk plume beneath the eastern portion of the Site (Geomatrix, 2008). COCs were not detected above the laboratory reporting limit in samples from B1-Zone monitoring well 51-D, suggesting that the Mohawk plume was not affecting deeper B1-Zone groundwater at this location (Figure 10).

5. CONCLUSIONS

Based on the results of the 2013 groundwater monitoring event, conclusions for the reporting period include:

- The overall distribution of COCs as interpreted from reported analyses of groundwater samples collected during the sampling event generally is consistent with historical monitoring events.
- The Mohawk plume continues to affect groundwater quality beneath the eastern portion of the Site based on monitoring results for well 31-S and additional Site characterization conducted in November 2007.
- Approximately 35 million gallons of groundwater were extracted from zones A, B1, and B2 in 2013 via eight onsite extractions wells and the basement dewatering sumps, resulting in removal of approximately 49 pounds of COCs. The total estimated mass of chemicals removed from 1982 through 2013 is 5,715 pounds.
- The estimated rate of removal by groundwater extraction during 2013 was 1.4 pounds of COCs per million gallons of water extracted.
- A substantial portion of the mass of TCE and cDCE removed onsite in 2013 may be attributed to offsite sources of COCs not related to AMD.
- The groundwater sample from extraction well EW-3 contained low COC concentrations. This well remained turned off for 2013 with no observed effect on the performance of the groundwater extraction system.

REFERENCES

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2. AMEC Geomatrix, Inc., 2008, "Third Five-Year Review Report, 915 DeGuigne Drive, Sunnyvale, California," 31 December 2008.

3. AMEC Geomatrix, Inc., 2013, "2012 Annual Groundwater Monitoring Report, 915 DeGuigne Drive, Sunnyvale, California," 31 January 2013.

4. California Regional Water Quality Control Board, 1991, "Order No. 91-101, Site Cleanup Requirements for: Advanced Micro Devices, 915 DeGuigne Drive, Sunnyvale, Santa Clara County," 19 June 1991.

5. California Regional Water Quality Control Board, 2009, "Order No. R2-2009-0059, NPDES No. CAG912003, General Waste Discharge Requirements for: Discharge or Reuse of Extracted and Treated Groundwater resulting from the Cleanup of Groundwater Polluted by Volatile Organic Compounds (VOC)," 19 August 2009.

6. Geomatrix Consultants, Inc., 2006, "2005 Annual Groundwater Monitoring Report, Advanced Micro Devices, Inc., 915 DeGuigne Drive," 31 January 2006.

7. Geomatrix Consultants, Inc., 2008, "Subsurface Investigation Report, Former Advanced Micro Devices, 915 DeGuigne Drive," 31 January 2008.

8. Parsons ES, 1998, "Letter to Cecilio Felix of California Regional Water Quality Control Board-San Francisco Bay Region: 1998 Revisions to Sampling Plan and Reporting Schedule, Advanced Micro Devices, Inc., 915 DeGuigne Drive Facility," 7 October 1998.

9. The Source Group, Inc., 2005, "Semi-Annual Self-Monitoring Report, Quarter 1 and Quarter 2, 2005, Mohawk Laboratories," 30 July 2005.

10. United States Environmental Protection Agency, 2008, "USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review," June 2008.

TABLES

TABLE I

GROUNDWATER ELEVATIONS[1]
14 OCTOBER 2013
915 DEGUIGNE DRIVE
SUNNYVALE, CALIFORNIA

Well ID	Aquifer Zone Screened	Top of Casing Elevation (feet msl)	Depth to Groundwater (feet btoc)	Groundwater Elevation (feet msl)
1-S	A	34.37	9.19	25.18
2-S	A	36.82	12.12	24.70
3-S	A	39.47	11.24	28.23
8-S	A	37.84	13.56	24.28
11-S	A	35.66	10.93	24.73
18-S	A	36.29	12.10	24.19
19-S	A	37.07	13.59	23.48
31-S	A	36.51	11.92	24.59
40-S	A	37.73	11.32	26.41
41-S	A	39.57	9.64	29.93
49-S	A	38.52	11.65	26.87
10-D	B1	37.09	12.36	24.73
19-D	B1	36.69	13.55	23.14
20-D	B1	37.71	13.76	23.95
40-D	B1	37.57	11.22	26.35
41-D	B1	39.56	9.60	29.96
49-D	B1	38.32	11.40	26.92
51-D	B1	36.40	10.41	25.99
11-DD	B2	35.97	19.35	16.62
18-DD	B2	36.44	13.65	22.79
20-DD	B2	37.81	14.31	23.50
32-DD	B2	39.12	22.02	17.10
42-DD	B2	36.91	15.43	21.48
43-DD	B2	37.11	16.11	21.00
45-DD	B2	33.16	9.96	23.20
49-DD	B2	38.61	11.65	26.96
50-DDD	B3	35.96	8.11	27.85

Note:

1. Water levels were measured by Field Solutions, Inc. of San Jose, California.

Abbreviations:

msl = mean sea level
btoc = below top of casing

TABLE II

ANALYTICAL RESULTS FOR DETECTED COMPOUNDS IN GROUNDWATER SAMPLES[1,2]
OCTOBER - NOVEMBER 2013
915 DEGUIGNE DRIVE
SUNNYVALE, CALIFORNIA

Concentrations reported in micrograms per liter (µg/L)

Well ID	Aquifer Zone	Sampling Date	PCE	TCE	cDCE	tDCE	VC	Freon 113	1,1,1-TCA	1,1-DCA	1,1-DCE	1,2,4-TCB
BS-6	A	10/31/2013	<0.5[3]	**5.4**[4]	**110**	**1.6**	<0.5	<2.0	<0.5	**0.5**	<0.5	<1.0
Sumps 1-4	A	10/30/2013	<0.5	**43**	**37**	**0.7**	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5
EW-1	A/B1	10/30/2013	<0.5	**93**	**40**	**0.8**	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5
EW-2	A/B1	10/30/2013	<1.0	**130**	**39**	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0	<1.0
EW-3	A/B1	11/08/2013	<0.5	**1.0**	**1.1**	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5
EW-4	A/B1	10/30/2013	<1.3	**4.6**	**160**	**2.5**	<1.3	<5.0	<1.3	<1.3	<1.3	<1.3
EW-5	A/B1	10/30/2013	<1.0	**55**	**110**	**1.7**	<1.0	**40**	<1.0	<1.0	<1.0	**110 J**[5]
EW-6	A/B1	10/30/2013	**1.0**	**57**	**63**	**1.5**	<0.5	<2.0	**0.5**	<0.5	<0.5	**82 J**
EW-6 (Dup)	A/B1	10/30/2013	**0.9**	**67**	**86**	**1.8**	<0.5	**3.0**	**0.6**	<0.5	**0.6**	**88 J**
EW-7	B2	10/30/2013	<1.0	**120**	**13**	<1.0	<1.0	**5.9**	<1.0	<1.0	<1.0	**2.2 J**
EW-8	B2	10/30/2013	<0.5	**97**	**8.9**	<0.5	<0.5	**5.7**	<0.5	<0.5	<0.5	<0.5
EW-9	B2	10/30/2013	<0.5	**33**	**16**	<0.5	<0.5	**3.2**	<0.5	<0.5	<0.5	<0.5
1-S	A	10/31/2013	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	**0.6**	<0.5	<0.5
2-S	A	11/06/2013	<0.5	**120 J**	**43**	**1.0**	**1.2**	<2.0	<0.5	<0.5	<0.5	<0.5
3-S	A	10/31/2013	<0.5	<0.5	**12**	**0.6**	<0.5	<2.0	<0.5	**0.7**	<0.5	<0.5
8-S	A	11/06/2013	<0.5	**12 J**	**4.8**	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5
11-S	A	10/31/2013	<0.5	**1.8**	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5
18-S	A	11/01/2013	<0.5	**3.3**	**2.6**	**0.8**	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5
19-S	A	11/07/2013	<0.5	**8.7 J**	**40**	**1.6**	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5
31-S	A	11/06/2013	<0.5	**6.0 J**	**86**	**0.9**	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5
40-S	A	11/07/2013	<0.5	**110**	**68**	**1.0**	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5
41-S	A	11/08/2013	**2.3**	**190**	**170**	**1.8**	**2.6**	<4.0	<1.0	<1.0	<1.0	<1.0
49-S	A	11/06/2013	**0.6**	**31**	**12**	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5
10-D	B1	11/08/2013	<2.5	**35**	**310**	<2.5	**2.8**	<10	<2.5	<2.5	<2.5	<2.5
10-D (Dup)	B1	11/08/2013	<2.5	**33**	**300**	<2.5	**2.8**	<10	<2.5	<2.5	<2.5	<2.5
19-D	B1	11/06/2013	<0.5	**15**	**28**	**0.9**	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5
20-D	B1	11/07/2013	**2.1**	**150**	**52**	<1.3	<1.3	<5.0	<1.3	<1.3	<1.3	<1.3
40-D	B1	11/06/2013	<0.5	**73 J**	**47**	**0.9**	**2.2**	<2.0	<0.5	<0.5	<0.5	<0.5
41-D	B1	11/08/2013	**1.4**	**200**	**180**	**2.4**	**2.9**	<5.0	<1.3	<1.3	<1.3	<1.3
49-D	B1	11/01/2013	<0.5	<0.5	**1.1**	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5
51-D	B1	10/31/2013	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5
11-DD	B2	11/06/2013	<0.5	**20**	**20**	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5
18-DD	B2	11/01/2013	<0.5	**37**	**10**	**0.7**	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5
20-DD	B2	11/07/2013	**1.1**	**130**	**70**	**1.4**	<0.5	**2.4**	<0.5	<0.5	**0.9**	<0.5
32-DD	B2	11/07/2013	<0.5	**130**	**35**	**0.6**	<0.5	**4.2**	<0.5	<0.5	<0.5	**0.6**
42-DD	B2	11/07/2013	<2.5	**15**	**290**	**4.0**	**3.5**	<10	<2.5	<2.5	<2.5	<2.5
43-DD	B2	11/01/2013	<0.5	**2.4**	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5
43-DD (Dup)	B2	11/01/2013	<0.5	**2.2**	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5
45-DD	B2	10/31/2013	<0.5	**2.0**	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5
49-DD	B2	11/01/2013	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5
50-DDD	B3	10/31/2013	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5

Notes:

1. Groundwater samples were collected by Field Solutions, Inc., of San Jose, California, and analyzed by Curtis & Tompkins, Ltd., of Berkeley, California, for the EPA Method 8010 list with Freon 113 in accordance with EPA Method 8260B.
2. Only detected compounds that are included in the Order are shown; for a full list of detected compounds, see lab reports.
3. "<" indicates constituent not detected above the laboratory reporting limit shown.
4. Results in **bold** indicate that the analyte was detected above the laboratory reporting limit.
5. "J" indicates that the analyte was positively identified in the sample; the associated numerical value is the approximate concentration of the analyte in the sample.

Abbreviations:

TCE = Trichloroethene
cDCE = cis-1,2-Dichloroethene
1,1,1-TCA = 1,1,1-Trichloroethane
1,1-DCA = 1,1-Dichloroethane
1,1-DCE = 1,1-Dichloroethene
1,2,4-TCB = 1,2,4-Trichlorobenzene
PCE = Tetrachloroethene
tDCE = trans-1,2-Dichloroethene
Freon 113 = 1,1,2-Trichloro-1,2,2-trifluoroethane
VC = Vinyl chloride
Dup = Duplicate sample

TABLE III

2013 EXTRACTION WELL MONITORING DATA
915 DEGUIGNE DRIVE
SUNNYVALE, CALIFORNIA

Well ID	Discharge Meter Reading (gallons) [1] 01/03/2013	01/03/2014	Gallons Extracted	Time Period (days)	Average Pumping Rate (gpd)	(gpm)
A-Zone						
Sumps 1-4 [2]	5,985,038	7,099,650	1,114,612	71	15,699	10.90
BS-6	29,408,582	34,047,044	4,638,462	365	12,708	8.83
Total Average Pumping Rate - A-Zone					**28,407**	**19.73**
Total Gallons Extracted - A-Zone			**5,753,074**			
A/B1-Zone						
EW-1	1,930,949	1,990,448	59,499	365	163	0.11
EW-2	5,801,637	6,383,394	581,757	365	1,594	1.11
EW-3	0	0	0	0	0	0
EW-4	15,269,805	17,578,256	2,308,451	365	6,325	4.39
EW-5	18,975,859	25,560,588	6,584,729	365	18,040	12.53
EW-6	40,960,355	53,751,545	12,791,190	365	35,044	24.34
Total Average Pumping Rate - A/B1-Zone					**61,166**	**42.48**
Total Gallons Extracted - A/B1-Zone			**22,325,626**			
B2-Zone						
EW-7	1,375,514	2,039,893	664,379	365	1,820	1.26
EW-8	19,305,250	22,209,152	2,903,902	365	7,956	5.52
EW-9	49,771,363	53,509,428	3,738,065	364	10,269	7.13
Total Average Pumping Rate - B2-Zone					**20,017**	**13.90**
Total Gallons Extracted - B2-Zone			**7,306,346**			
Total Average Pumping Rate					**109,590**	**76.10**
Total Gallons Extracted 2013			**35,385,046**			

Note:

1. Meters read by Field Solutions, Inc.
2. Groundwater extracted from basement sumps 1, 2, 3, and 4 is measured by a single meter. Previously sumps 1-4 were not included in calculations of total flow; starting October 25, 2013 flow from these sumps was included in calculating flow to the treatment system.

Abbreviations:

gpd = gallons per day
gpm = gallons per minute

TABLE IV
STATUS OF CHEMICALS REMOVED - 2013 [1]
915 DEGUIGNE DRIVE
SUNNYVALE, CALIFORNIA

Mechanism	Volume Extracted (gallons)	Average Influent VOCs (µg/L)	Estimated Total VOCs Removed (pounds)
1982/1983 Excavations	NA	NA	159 [2]
Groundwater Extraction			
1984 through 1996	477,463,020[3]	1,091 [3]	4,331
Groundwater Extraction			
1997	31,160,950	457	119
1998	26,785,990	384	85
1999	27,000,040	504	115
2000	27,590,000	477	110
2001	34,394,080	381	109
2002	37,239,480	323	99
2003	34,654,860	315	90
2004	30,208,790	264	66
2005	35,383,730	225	66
2006	27,312,510	233	53
2007	24,105,860	184	37
2008	30,090,510	183	46
2009	33,068,180	179	49
2010	27,947,860	168	39
2011	29,739,482	165	41
2012	32,947,600	173	51
Subtotal	**489,629,922**	**288**	**1,176**
2013 Groundwater Extraction			
1st Quarter 2013	9,392,200	135	11
2nd Quarter 2013	7,939,800	214	14
3rd Quarter 2013	7,893,000	161	11
4th Quarter 2013	9,115,400	181	14
2013 Total	**34,340,400**	**173**	**49**
Total	**1,001,433,342**		**5,715**

Notes:

1. The extraction volumes above for 1997 through 2000 (and associated VOC mass removed) are based upon meter readings for individual extraction wells. The extraction volumes for 2001 through 2011 (and associated VOC mass removed) are based on readings taken from the Santa Clara Valley Water District totalizer that measures the combined influent from the nine on-site extraction wells located on the AMD 915 DeGuigne facility (does not include the volume extracted by Basement Sump 6). The extraction volumes for 2012 and 2013 (and associated VOC mass removed) are based on readings taken from the Santa Clara Valley Water District totalizer that measures the effluent from the treatment system, and includes the basement dewatering sumps.
2. Approximately 151 pounds of trichlorobenzene were excavated in 1982/1983 and are included in this VOC estimate.
3. Estimated value.

Abbreviations:

µg/L = micrograms per liter
NA = not available
VOCs = volatile organic compounds

TABLE V

CALCULATED AVERAGE MASS REMOVAL RATES FOR EXTRACTION WELLS
915 DEGUIGNE DRIVE
SUNNYVALE, CALIFORNIA

Well ID	Aquifer Zone	Sampling Date [1]	Annual Average Extraction Rate [2] (gpd)	Total VOC Concentration (µg/L)	VOC Removal Rate (lbs/day) [3]	% VOC Mass Removal per Zone [4]	% Total VOC Mass Removal [5]
Sumps 1-4	A	10/30/2013	15,699	81	0.011	6.2	5.7
BS-6	A	10/31/2013	12,708	118	0.012	7.3	6.8
EW-1	A/B1	10/30/2013	163	134	0.0002	0.1	0.1
EW-2	A/B1	10/30/2013	1,594	169	0.002	1.3	1.2
EW-3	A/B1	11/08/2013	0	2.1	0.000	0.0	0.0
EW-4	A/B1	10/30/2013	6,325	167	0.009	5.2	4.8
EW-5	A/B1	10/30/2013	18,040	348	0.052	31	28
EW-6	A/B1	10/30/2013	35,044	288	0.084	49	46
Subtotal	**A/B1**		**89,573**		**0.171**	**100**	**92**
EW-7	B2	10/30/2013	1,820	141	0.0021	15	1.2
EW-8	B2	10/30/2013	7,956	112	0.0074	53	4.0
EW-9	B2	10/30/2013	10,241	52	0.0044	32	2.4
Subtotal	**B2**		**20,017**		**0.014**	**100**	**8**
		Total	**109,591**		**0.185**		

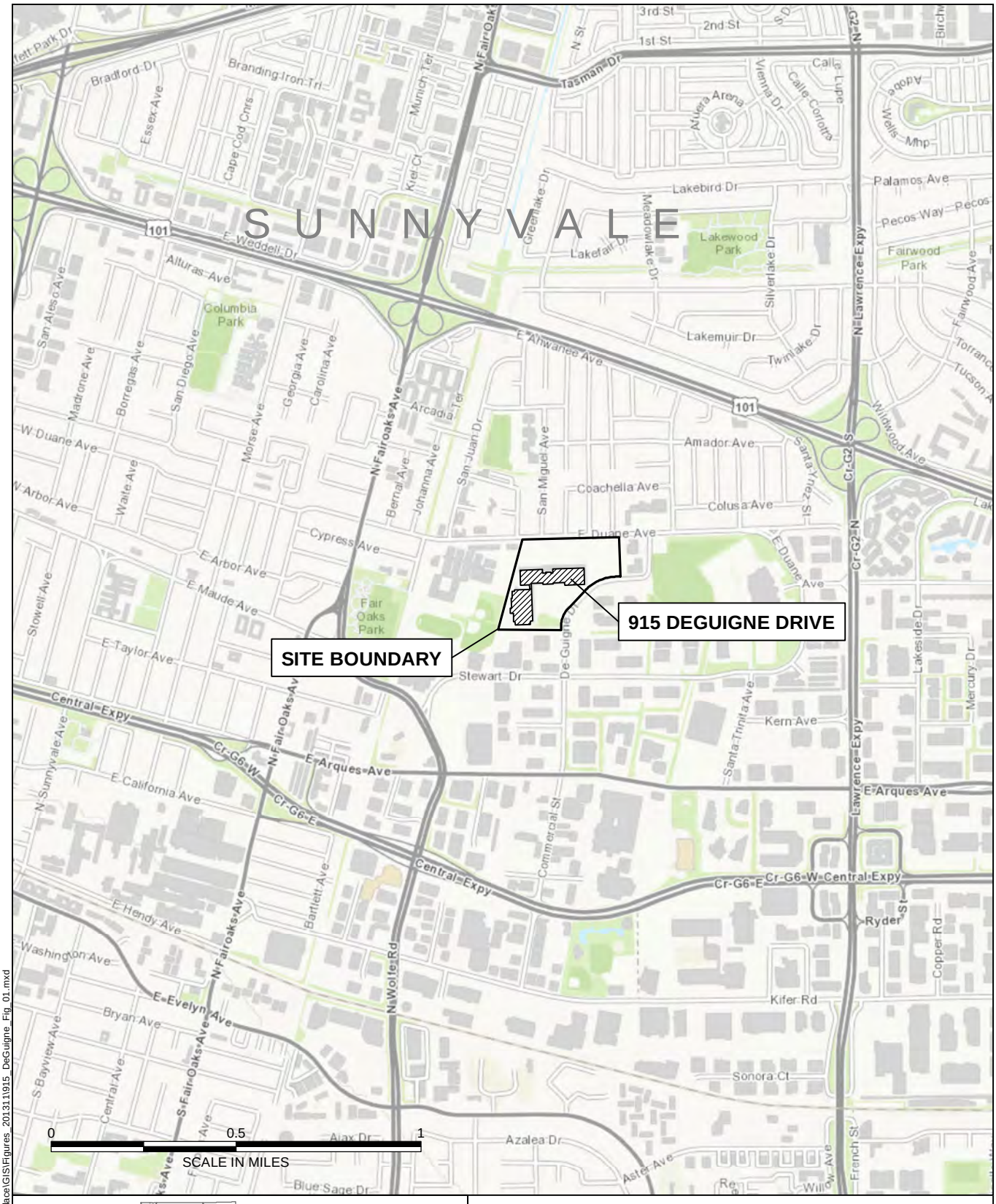
Notes:

1. Groundwater samples were collected by Field Solutions, Inc., of San Jose, California, and analyzed by Curtis & Tompkins, Ltd., of Berkeley, California. All samples analyzed for the EPA Method 8010 list with Freon 113 in accordance with EPA Method 8260B. These results are summarized in Table II of this report.
2. Annual average extraction rate is calculated in Table VI of this report.
3. Calculated as: [extraction rate (gpd)] x [total VOC concentration (µg/L)] x [0.000001 grams/microgram] x [1 pound / 454 grams] x [3.78 L/gallon].
4. Mass removal rate for individual extraction well divided by the total mass removal rate for the A/B1 Zones, or the B2 Zone x 100%.
5. Mass removal rate for individual extraction well (or sump) divided by the total mass removal rate for Sumps 1-4, BS-6, and the A/B1-Zone and B2-Zone extraction wells x 100%.

Abbreviations:

µg/L = micrograms per liter
gpd = gallons of groundwater extracted per day
lbs/day = pounds per day
VOC = volatile organic compound

FIGURES



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915 DEGUIGNE DRIVE
SUNNYVALE, CALIFORNIA

SITE LOCATION MAP

JANUARY 2014

FIGURE 1

SAN JUAN DR
SAN LUISITO WAY
E DUANE AVE
SAN MIGUEL AVE
SAN PEDRO AVE
915 DEGUIGNE DRIVE
DEGUIGNE DR
SUBMICRON DEVELOPMENT CENTER
STEWART DR
THOMPSON PL
E ARQUES AVE

SITE BOUNDARY
CURRENT ON-SITE BUILDING
OTHER BUILDING

N
W
E
S

0 200 400
SCALE IN FEET 1 INCH = 200 FEET

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915 DEGUIGNE DRIVE
SUNNYVALE, CALIFORNIA

SITE PLAN AND VICINITY

JANUARY 2014

FIGURE 2

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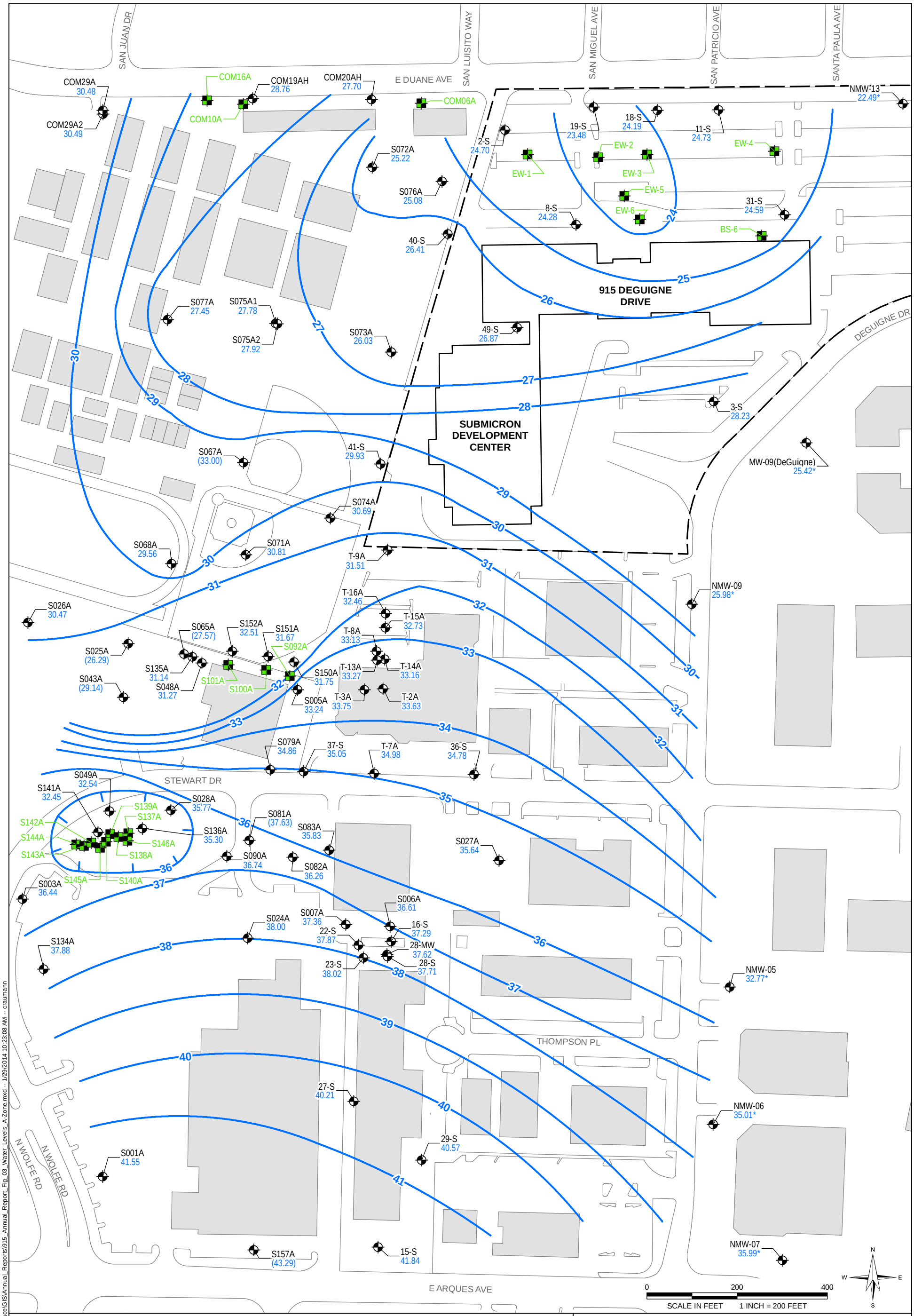

WELL ID
WATER LEVEL — A-ZONE MONITORING WELL WITH WATER LEVEL IN FEET (NAVD88)

WELL ID — EXTRACTION WELL

40 — GROUNDWATER ELEVATION CONTOUR

SITE BOUNDARY

CURRENT ON-SITE BUILDING

OTHER BUILDING

NOTES

1. *MOHAWK WELLS ARE SURVEYED TO A DIFFERENT VERTICAL DATUM (NGVD29), AND ARE OFFSET BY APPROXIMATELY 2.7 FEET.
2. WATER LEVELS IN PARENTHESIS, E.G., (43.29), WERE NOT USED IN GENERATING CONTOURS.
3. CONTOURS ARE BASED ON INTERPRETATION OF MONITORING-WELL DATA AND CURRENT UNDERSTANDING OF HYDROGEOLOGIC CONDITIONS. THEY ARE PROVIDED FOR CLARITY AND ARE NOT INTENDED TO IMPLY CERTAINTY.
4. EW-1 THROUGH EW-6 ARE SCREENED ACROSS BOTH THE A AND B1 ZONES.

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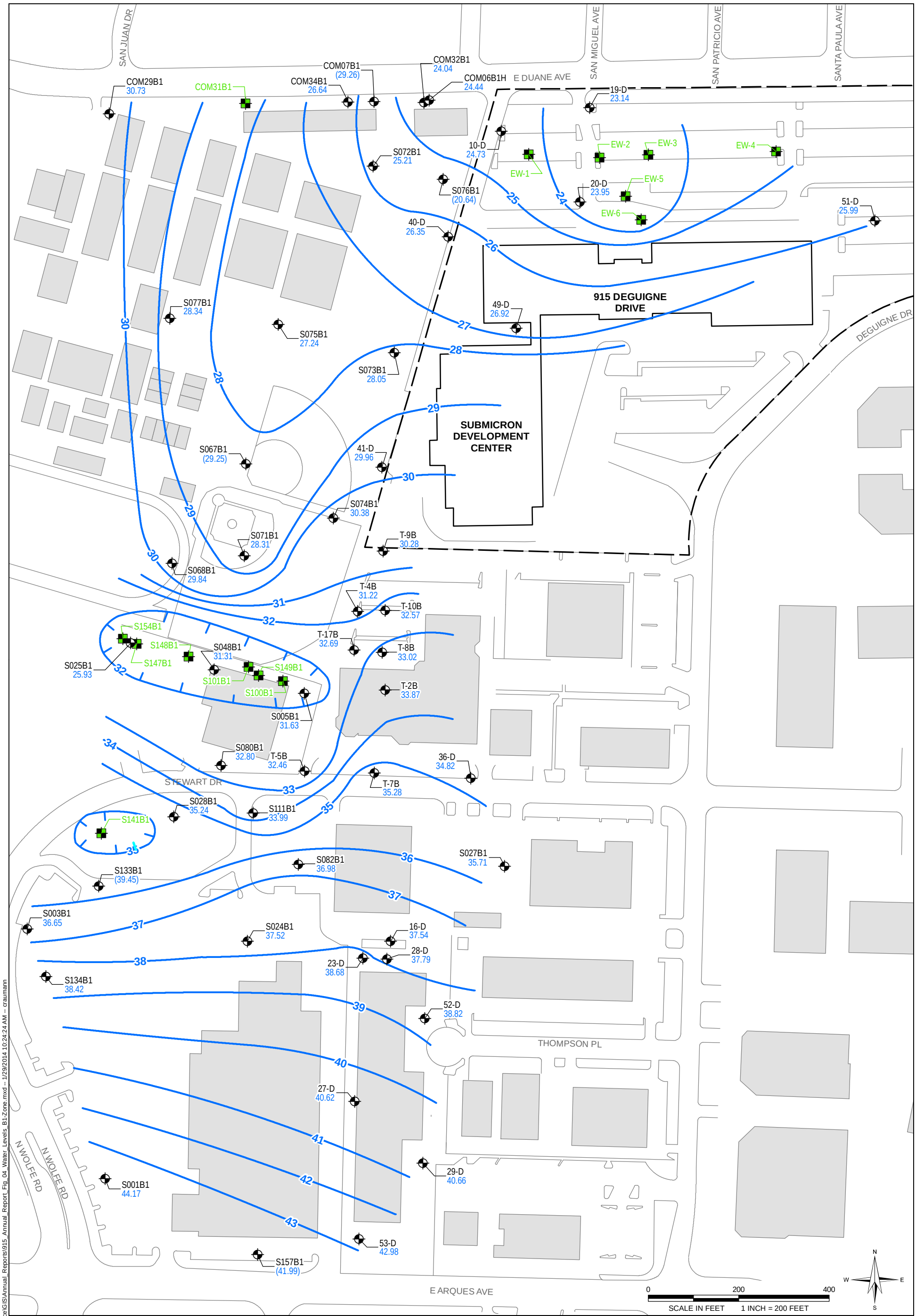
915 DEGUIGNE DRIVE
SUNNYVALE, CALIFORNIA

A-ZONE WATER LEVELS OCTOBER 2013

JANUARY 2014

FIGURE 3

G:\39751_AMD_Former 901-902 Thompson Place\GIS\Annual_Reports\915_Annual_Report_Fig_03_Water_Levels_A-Zone.mxd -- 1/29/2014 10:23:08 AM -- craumann



WELL ID
WATER LEVEL — B1-ZONE MONITORING WELL WITH WATER LEVEL IN FEET (NAVD88)

WELL ID — EXTRACTION WELL

40 — GROUNDWATER ELEVATION CONTOUR

SITE BOUNDARY

CURRENT ON-SITE BUILDING

OTHER BUILDING

NOTES

1. WATER LEVELS IN PARENTHESIS, E.G., (43.29), WERE NOT USED IN GENERATING CONTOURS.
2. CONTOURS ARE BASED ON INTERPRETATION OF MONITORING-WELL DATA AND CURRENT UNDERSTANDING OF HYDROGEOLOGIC CONDITIONS. THEY ARE PROVIDED FOR CLARITY AND ARE NOT INTENDED TO IMPLY CERTAINTY.
3. EW-1 THROUGH EW-6 ARE SCREENED ACROSS BOTH THE A AND B1 ZONES.

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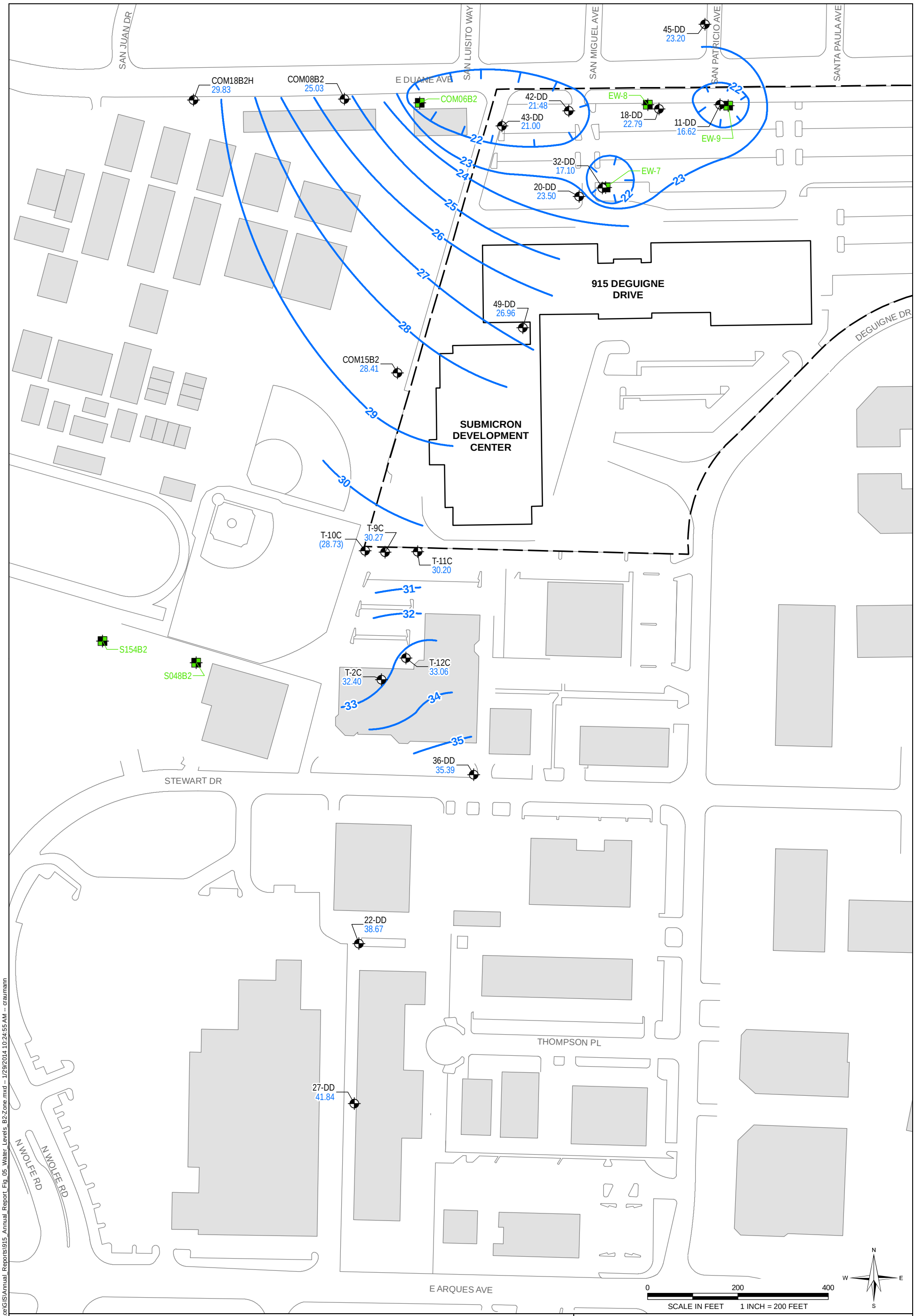
915 DEGUIGNE DRIVE
SUNNYVALE, CALIFORNIA

B1-ZONE WATER LEVELS OCTOBER 2013

JANUARY 2014

FIGURE 4

G:\39751_AMD_Former 901-902 Thompson Place\GIS\Annual_Reports\915_Annual_Report_Fig_04_Water_Levels_B1-Zone.mxd -- 1/29/2014 10:24:24 AM -- craumann



WELL ID
WATER LEVEL — B2-ZONE MONITORING WELL WITH WATER LEVEL IN FEET (NAVD88)

WELL ID — EXTRACTION WELL

40 — GROUNDWATER ELEVATION CONTOUR

SITE BOUNDARY

CURRENT ON-SITE BUILDING

OTHER BUILDING

NOTES

1. WATER LEVELS IN PARENTHESIS, E.G., (43.29), WERE NOT USED IN GENERATING CONTOURS.
2. CONTOURS ARE BASED ON INTERPRETATION OF MONITORING-WELL DATA AND CURRENT UNDERSTANDING OF HYDROGEOLOGIC CONDITIONS. THEY ARE PROVIDED FOR CLARITY AND ARE NOT INTENDED TO IMPLY CERTAINTY.

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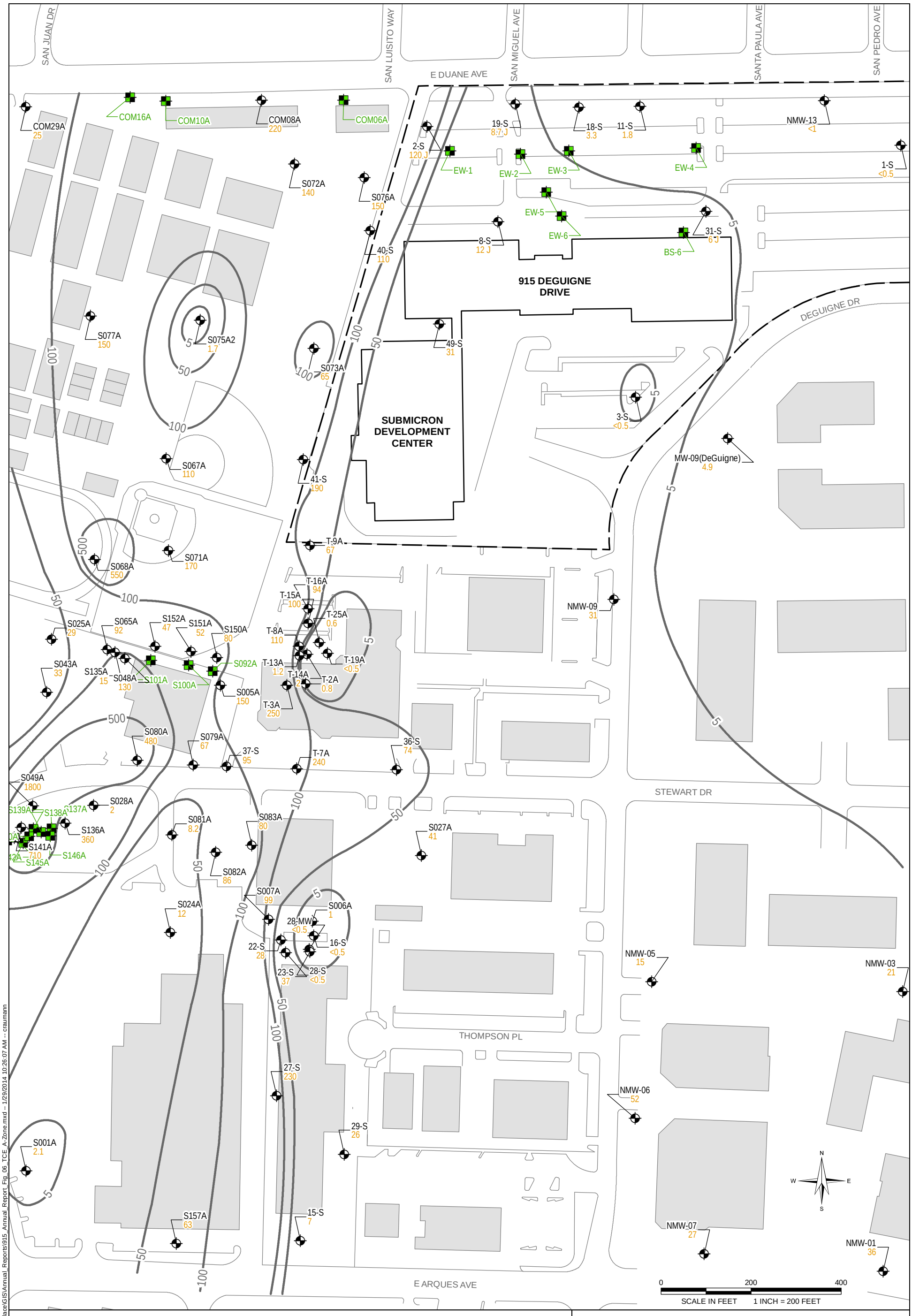
915 DEGUIGNE DRIVE
SUNNYVALE, CALIFORNIA

B2-ZONE WATER LEVELS OCTOBER 2013

JANUARY 2014

FIGURE 5

G:\39751_AMD_Former 901-902 Thompson Place\GIS\Annual_Reports\915_Annual_Report_Fig_05_Water_Levels_B2-Zone.mxd -- 1/29/2014 10:24:55 AM -- craumann



WELL ID
TCE
A-ZONE MONITORING WELL WITH TCE CONCENTRATION (µg/L)

WELL ID
EXTRACTION WELL

5
TCE CONCENTRATION CONTOUR

SITE BOUNDARY

CURRENT ON-SITE BUILDING

OTHER BUILDING

NOTES

1. CONTOURS ARE BASED ON INTERPRETATION OF MONITORING-WELL DATA, PREVIOUS SITE-INVESTIGATION DATA, AND CURRENT UNDERSTANDING OF HYDROGEOLOGIC CONDITIONS. THEY ARE PROVIDED FOR CLARITY AND ARE NOT INTENDED TO IMPLY CERTAINTY.
2. EW-1 THROUGH EW-6 ARE SCREENED ACROSS BOTH THE A AND B1 ZONES.

TCE = TRICHLOROETHENE
µg/L = MICROGRAMS PER LITER
J = ESTIMATED CONCENTRATION

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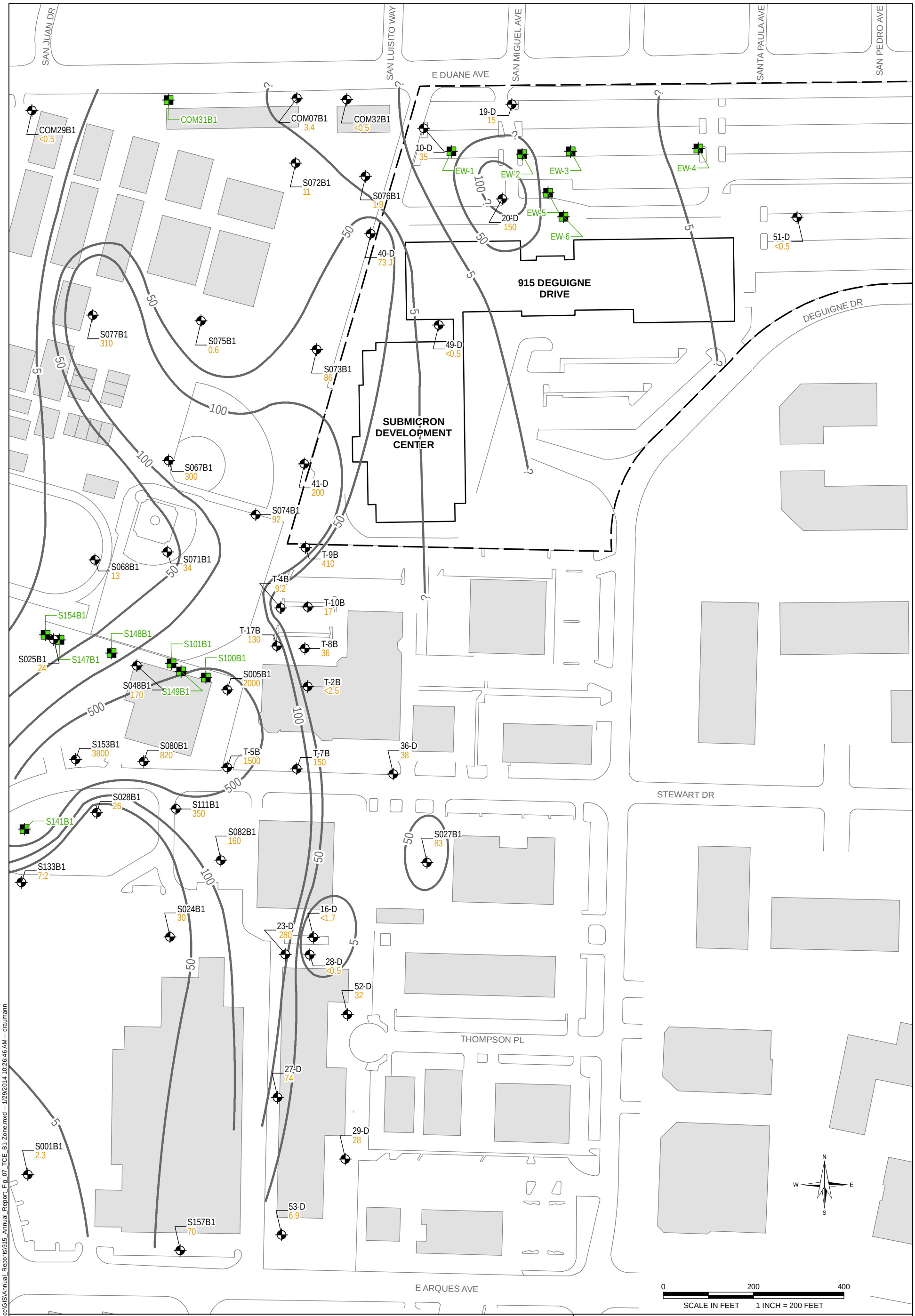
915 DEGUIGNE DRIVE
SUNNYVALE, CALIFORNIA

A-ZONE TCE CONTOURS OCTOBER 2013

JANUARY 2014

FIGURE 6

G:\39751_AMD_Former 901-902 Thompson Place\GIS\Annual_Reports\915_Annual_Report_Fig_06_TCE_A-Zone.mxd -- 1/29/2014 10:26:07 AM -- craumann



WELL ID
TCE
B1-ZONE MONITORING WELL WITH TCE CONCENTRATION (µg/L)

WELL ID
EXTRACTION WELL

5
TCE CONCENTRATION CONTOUR

SITE BOUNDARY

CURRENT ON-SITE BUILDING

OTHER BUILDING

NOTES

1. CONTOURS ARE BASED ON INTERPRETATION OF MONITORING-WELL DATA, PREVIOUS SITE-INVESTIGATION DATA, AND CURRENT UNDERSTANDING OF HYDROGEOLOGIC CONDITIONS. THEY ARE PROVIDED FOR CLARITY AND ARE NOT INTENDED TO IMPLY CERTAINTY.
2. EW-1 THROUGH EW-6 ARE SCREENED ACROSS BOTH THE A AND B1 ZONES.

TCE = TRICHLOROETHENE
µg/L = MICROGRAMS PER LITER
J = ESTIMATED CONCENTRATION

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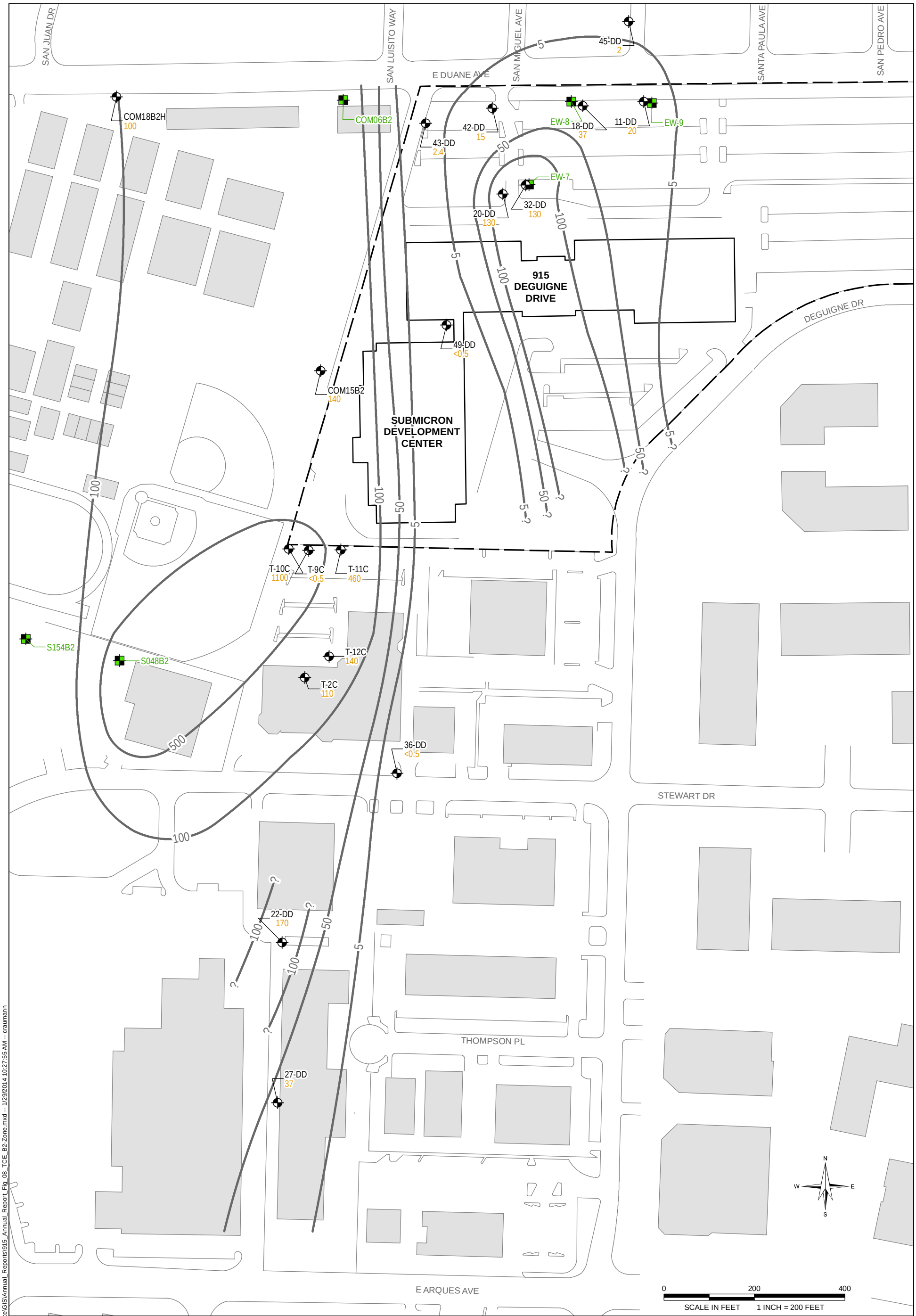
915 DEGUIGNE DRIVE
SUNNYVALE, CALIFORNIA

B1-ZONE TCE CONTOURS OCTOBER 2013

JANUARY 2014

FIGURE 7

G:\39751_AMD_Former 901-902 Thompson Place\GIS\Annual_Reports\915_Annual_Report_Fig_07_TCE_B1-Zone.mxd -- 1/29/2014 10:26:46 AM -- craumann



WELL ID / TCE — B2-ZONE MONITORING WELL WITH TCE CONCENTRATION (µg/L)

WELL ID — EXTRACTION WELL

5 — TCE CONCENTRATION CONTOUR

SITE BOUNDARY

CURRENT ON-SITE BUILDING

OTHER BUILDING

NOTES

1. CONTOURS ARE BASED ON INTERPRETATION OF MONITORING-WELL DATA, PREVIOUS SITE-INVESTIGATION DATA, AND CURRENT UNDERSTANDING OF HYDROGEOLOGIC CONDITIONS. THEY ARE PROVIDED FOR CLARITY AND ARE NOT INTENDED TO IMPLY CERTAINTY.
2. EW-1 THROUGH EW-6 ARE SCREENED ACROSS BOTH THE A AND B1 ZONES.

TCE = TRICHLOROETHENE
µg/L = MICROGRAMS PER LITER
J = ESTIMATED CONCENTRATION

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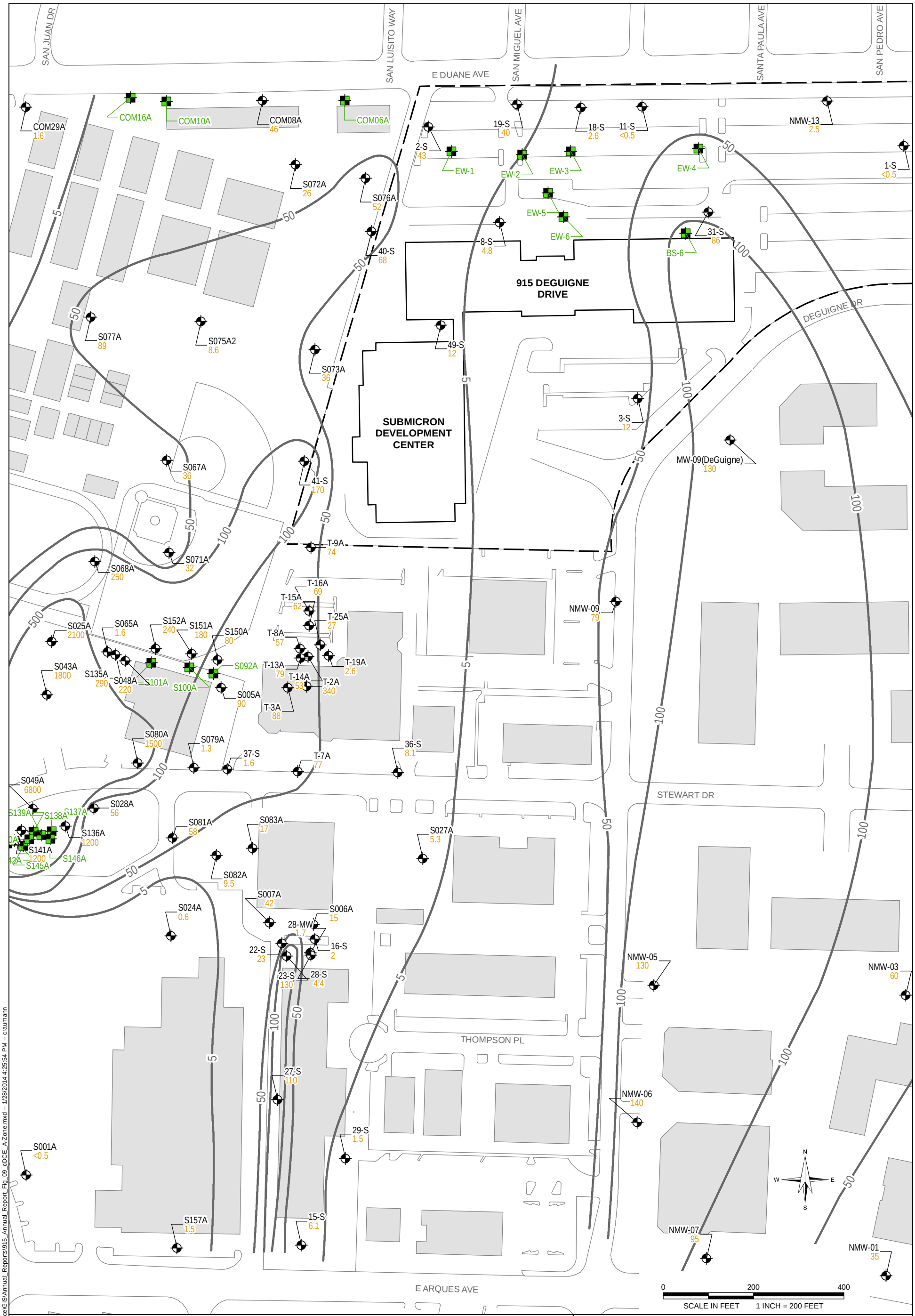
915 DEGUIGNE DRIVE
SUNNYVALE, CALIFORNIA

B2-ZONE TCE CONTOURS OCTOBER 2013

JANUARY 2014

FIGURE 8

G:\39751_AMD_Former 901-902 Thompson Place\GIS\Annual_Reports\915_Annual_Report_Fig_08_TCE_B2-Zone.mxd -- 1/29/2014 10:27:55 AM -- craumann



WELL ID
cDCE
A-ZONE MONITORING WELL WITH cDCE CONCENTRATION (µg/L)

WELL ID
EXTRACTION WELL

5
cDCE CONCENTRATION CONTOUR

SITE BOUNDARY

CURRENT ON-SITE BUILDING

OTHER BUILDING

NOTES

1. CONTOURS ARE BASED ON INTERPRETATION OF MONITORING-WELL DATA, PREVIOUS SITE-INVESTIGATION DATA, AND CURRENT UNDERSTANDING OF HYDROGEOLOGIC CONDITIONS. THEY ARE PROVIDED FOR CLARITY AND ARE NOT INTENDED TO IMPLY CERTAINTY.
2. EW-1 THROUGH EW-6 ARE SCREENED ACROSS BOTH THE A AND B1 ZONES.

cDCE = CIS-1,2-DICHLOROETHENE
µg/L = MICROGRAMS PER LITER
J = ESTIMATED CONCETRATION

HALEY & ALDRICH

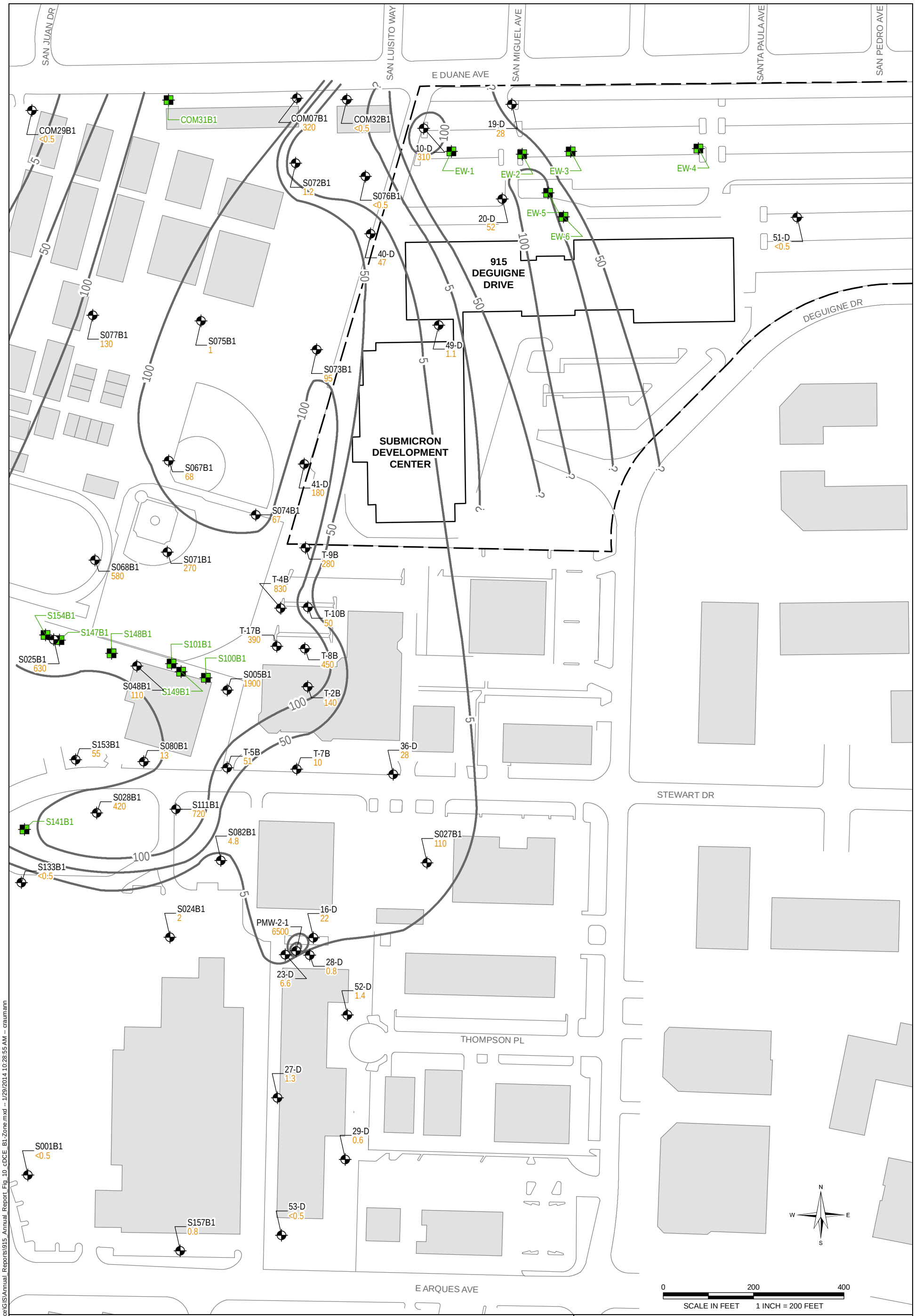
915 DEGUIGNE DRIVE
SUNNYVALE, CALIFORNIA

A-ZONE cDCE CONTOURS OCTOBER 2013

JANUARY 2014

FIGURE 9

G:\39751_AMD_Former 901-902 Thompson Place\GIS\Annual_Reports\915_Annual_Report_Fig_09_cDCE_A-Zone.mxd -- 1/28/2014 4:25:54 PM -- craumann



WELL ID
cDCE
B1-ZONE MONITORING WELL WITH cDCE CONCENTRATION (µg/L)

WELL ID
EXTRACTION WELL

5
cDCE CONCENTRATION CONTOUR

SITE BOUNDARY

CURRENT ON-SITE BUILDING

OTHER BUILDING

NOTES

1. CONTOURS ARE BASED ON INTERPRETATION OF MONITORING-WELL DATA, PREVIOUS SITE-INVESTIGATION DATA, AND CURRENT UNDERSTANDING OF HYDROGEOLOGIC CONDITIONS. THEY ARE PROVIDED FOR CLARITY AND ARE NOT INTENDED TO IMPLY CERTAINTY.
2. EW-1 THROUGH EW-6 ARE SCREENED ACROSS BOTH THE A AND B1 ZONES.

cDCE = CIS-1,2-DICHLOROETHENE
µg/L = MICROGRAMS PER LITER
J = ESTIMATED CONCETRATION

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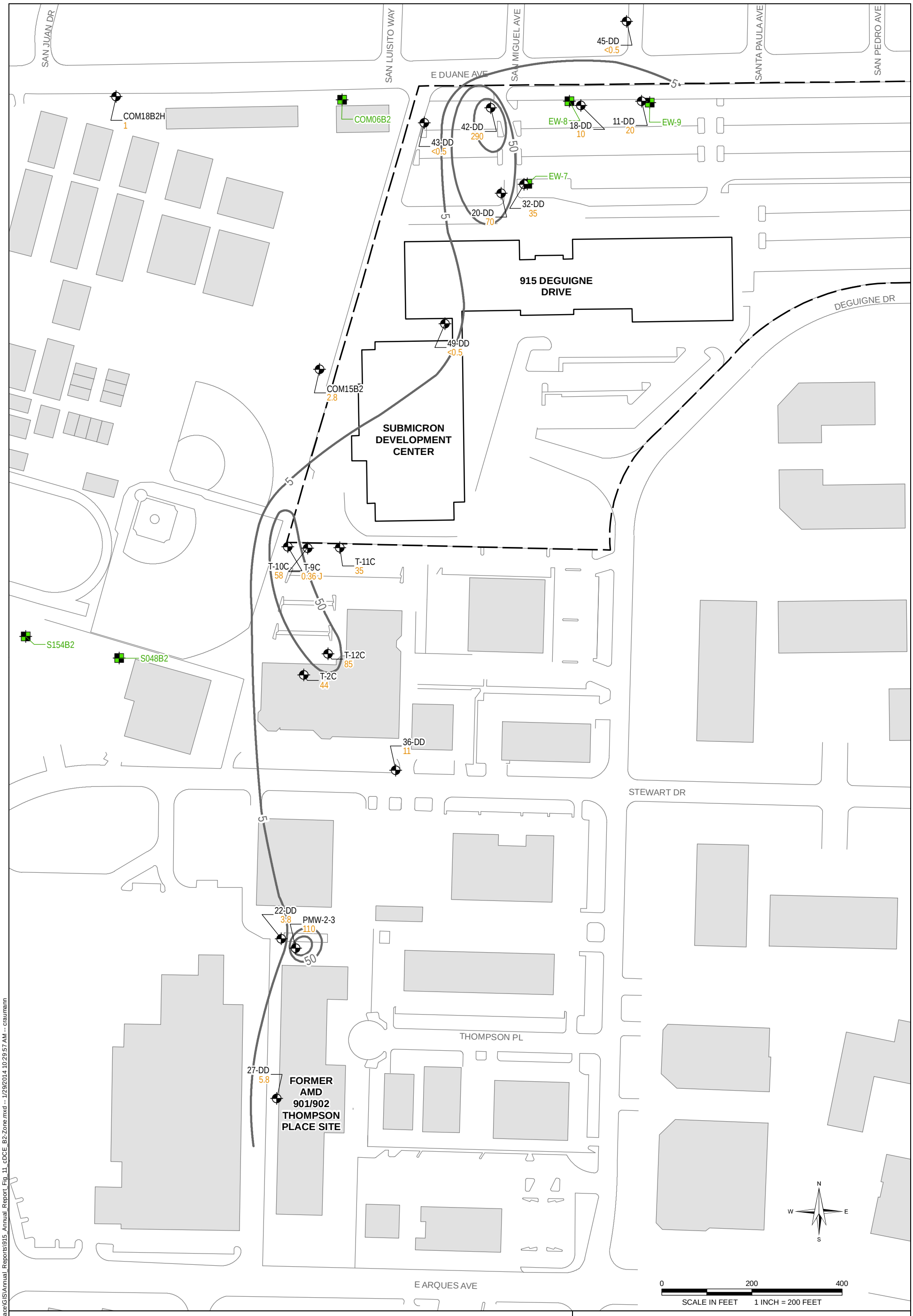
915 DEGUIGNE DRIVE
SUNNYVALE, CALIFORNIA

B1-ZONE cDCE CONTOURS OCTOBER 2013

JANUARY 2014

FIGURE 10

G:\39751_AMD_Former 901-902 Thompson Place\GIS\Annual_Reports\915_Annual_Report_Fig_10_cDCE_B1-Zone.mxd -- 1/29/2014 10:28:55 AM -- craumann



WELL ID
cDCE
B2-ZONE MONITORING WELL WITH cDCE CONCENTRATION (µg/L)

WELL ID
EXTRACTION WELL

5
cDCE CONCENTRATION CONTOUR

SITE BOUNDARY

CURRENT ON-SITE BUILDING

OTHER BUILDING

NOTES

1. CONTOURS ARE BASED ON INTERPRETATION OF MONITORING-WELL DATA, PREVIOUS SITE-INVESTIGATION DATA, AND CURRENT UNDERSTANDING OF HYDROGEOLOGIC CONDITIONS. THEY ARE PROVIDED FOR CLARITY AND ARE NOT INTENDED TO IMPLY CERTAINTY.
2. EW-1 THROUGH EW-6 ARE SCREENED ACROSS BOTH THE A AND B1 ZONES.

cDCE = CIS-1,2-DICHLOROETHENE
µg/L = MICROGRAMS PER LITER
J = ESTIMATED CONCETRATION

HALEY & ALDRICH

915 DEGUIGNE DRIVE
SUNNYVALE, CALIFORNIA

B2-ZONE cDCE CONTOURS OCTOBER 2013

JANUARY 2014

FIGURE 11

G:\39751_AMD_Former 901-902 Thompson Place\GIS\Annual_Reports\915_Annual_Report_Fig_11_cDCE_B2-Zone.mxd -- 1/29/2014 10:29:57 AM -- craumann

APPENDIX A

Historical TCE, 1,2-DCE, and Total VOC Concentrations

TABLE A-I
HISTORICAL TRICHLOROETHENE CONCENTRATIONS
915 DEGUIGNE DRIVE
SUNNYVALE, CALIFORNIA

Concentrations reported in micrograms per liter (µg/L)

	Extraction Wells									A-Zone Wells														
Date	EW-1	EW-2	EW-3	EW-4	EW-5	EW-6	EW-7	EW-8	EW-9	1-S	2-S	3-S	4-S	8-S	9-S	11-S	12-S	18-S	19-S	24-S	31-S	40-S	41-S	49-S
Feb-82	NS	NS	NS	NS	NS	NS	NS	NI	NI	NS	230	NS	490	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Mar-82	NS	NS	NS	NS	NS	NS	NS	NI	NI	NS	230	NS	NS	270	1000	16	NS	NS	NS	NS	NS	NS	NS	NS
Apr-82	NS	NS	NS	NS	NS	NS	NS	NI	NI	NS	NS	NS	NS	NS	NS	NS	NS	36	37	2	NS	NS	NS	NS
May-82	NS	NS	NS	NS	NS	NS	NS	NI	NI	NS	NS	NS	NS	380	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Jun-82	NS	NS	NS	NS	NS	NS	NS	NI	NI	NS	160	NS	2000	NS	4100	88	NS	1	13	NS	350	NS	NS	NS
Aug-82	NS	NS	NS	NS	NS	NS	NS	NI	NI	NS	220	NS	2100	210	4800	2	NS	15	NS	NS	320	NS	NS	NS
May-83	NS	NS	NS	NS	NS	NS	NS	NI	NI	NS	NS	NS	1200	NS	3700	NS	NS	NS	NS	NS	NS	NS	NS	NS
Jul-83	NS	NS	NS	NS	NS	NS	NS	NI	NI	NS	500	NS	NS	NS	NS	NS	NS	ND	ND	ND	NS	NS	NS	NS
Sep-83	NS	NS	NS	NS	NS	NS	NS	NI	NI	NS	1600	4	1700	NS	3500	1	NS	1	NS	3	150	70	1900	NS
Mar-84	21	ND	ND	ND	NS	NS	NS	NI	NI	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Jun-84	NS	NS	NS	NS	NS	NS	NS	NI	NI	NS	810	NS	NS	NS	NS	1	NS	2	1	ND	NS	NS	NS	NS
Jul-84	NS	NS	NS	NS	NS	NS	NS	NI	NI	NS	846	NS	NS	NS	NS	2	NS	1	NS	1	NS	NS	NS	NS
Aug-84	NS	NS	NS	NS	NS	NS	NS	NI	NI	NS	930	NS	NS	NS	NS	2	NS	NS	NS	ND	NS	490	NS	NS
Sep-84	NS	NS	NS	NS	NS	NS	NS	NI	NI	NS	900	NS	NS	NS	NS	NS	NS	ND	NS	NS	NS	540	2900	NS
Oct-84	NS	NS	NS	NS	390	470	NS	NI	NI	NS	830	NS	NS	NS	NS	NS	NS	ND	NS	NS	ND	350	1500	NS
Nov-84	NS	NS	NS	NS	NS	NS	NS	NI	NI	NS	2300	NS	4100	190	NS	37	NS	NS	ND	NS	ND	NS	7500	NS
Dec-84	NS	NS	NS	NS	NS	NS	NS	NI	NI	NS	850	NS	1400	NS	NS	NS	NS	4	2	59	NS	1200	NS	NS
Jan-85	NS	NS	NS	NS	NS	NS	NS	NI	NI	NS	1000	NS	1100	NS	3500	NS	NS	NS	NS	105	NS	880	2600	NS
Feb-85	NS	NS	NS	NS	NS	NS	NS	NI	NI	NS	910	NS	NS	76	NS	16	NS	2	ND	140	NS	860	1500	NS
Mar-85	NS	NS	NS	NS	NS	NS	NS	NI	NI	NS	670	NS	1300	NS	NS	ND	NS	ND	NS	190	NS	1100	1600	NS
Apr-85	NS	NS	NS	NS	NS	NS	NS	NI	NI	NS	1200	NS	1100	NS	NS	NS	NS	NS	ND	23	9	810	1700	NS
May-85	NS	NS	NS	NS	NS	NS	NS	NI	NI	NS	940	NS	NS	NS	NS	420	NS	ND	NS	180	NS	850	NS	NS
Jun-85	410	NS	ND	4	NS	NS	NS	NI	NI	NS	1190	NS	NS	NS	NS	21	NS	1	ND	310	NS	NS	NS	NS
Jul-85	NS	NS	NS	NS	NS	NS	NS	NI	NI	NS	260	NS	1960	120	4300	13	NS	2	ND	430	NS	1340	NS	NS
Aug-85	NS	NS	NS	NS	NS	500	NS	NI	NI	NS	1360	NS	NS	NS	NS	NS	NS	NS	NS	400	NS	NS	3700	NS
Oct-85	474	NS	NS	NS	NS	NS	NS	NI	NI	NS	379	NS	NS	NS	NS	21	NS	12	NS	446	NS	732	2446	NS
Dec-85	NS	NS	NS	NS	NS	NS	NS	NI	NI	NS	1100	ND	NS	130	3900	NS	NS	96	1.6	460	NS	NS	NS	NS
Feb-86	NS	NS	NS	NS	410	490	NS	NI	NI	NS	870	NS	1100	NS	NS	12	NS	15	NS	520	NS	720	560	NS
Apr-86	NS	NS	NS	NS	NS	NS	NS	NI	NI	NS	1250	NS	NS	NS	1800	NS	NS	NS	NS	NS	23	670	3100	NS
Jun-86	NS	570	NS	NS	NS	NS	NS	NI	NI	NS	NS	NS	1500	NS	NS	NS	NS	24	NS	650	NS	1000	1900	NS
Aug-86	360	NS	NS	NS	NS	NS	76	NI	NI	NS	NS	NS	NS	NS	2000	11	NS	NS	NS	NS	NS	NS	NS	NS
Oct-86	NS	NS	NS	NS	NS	NS	NS	NI	NI	NS	840	NS	1400	100	1600	14	NS	25	NS	650	NS	NS	2100	NS
Dec-86	NS	NS	2.3	NS	NS	NS	560	NI	NI	NS	NS	NS	NS	NS	1500	4.9	NS	5	NS	NS	NS	NS	NS	NS
Feb-87	NS	420	NS	NS	NS	280	360	NI	NI	NS	NS	NS	NS	NS	1300	7.2	NS	7.4	NS	NS	NS	NS	2200	NS
Apr-87	NS	NS	NS	NS	NS	NS	400	NI	NI	NS	NS	NS	NS	130	1150	7	NS	7	NS	ND	NS	NS	NS	NS
Jun-87	NS	NS	NS	NS	NS	NS	NS	NI	NI	NS	NS	NS	NS	NS	1100	5	NS	ND	NS	NS	2	ND	NS	NS
Aug-87	NS	NS	NS	NS	NS	NS	340	NI	NI	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Oct-87	NS	NS	NS	NS	NS	NS	NS	NI	NI	NS	NS	NS	NS	NS	800	NS	ND	NS	NS	NS	1	ND	NS	NS
Dec-87	NS	NS	NS	NS	NS	NS	NS	NI	NI	NS	NS	NS	NS	65	NS	NS	NS	NS	NS	NS	NS	NS	750	NS
Mar-88	NS	500	NS	45	NS	150	ND	NI	NI	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Jun-88	NS	NS	NS	8	NS	87	NS	NI	NI	ND	NS	ND	NS	NS	NS	NS	ND	NS	NS	NS	NS	NS	NS	NS
Sep-88	NS	NS	NS	9.8	440	220	NS	NI	NI	NS	NS	NS	NS	NS	NS	NS	0.6	NS	NS	NS	NS	NS	NS	NS
Dec-88	NS	NS	NS	NS	NS	NS	340	NI	NI	NS	NS	NS	AB	NS	AB	NS	1	NS	NS	NS	NS	NS	NS	200
Mar-89	NS	NS	NS	NS	NS	NS	NS	NI	NI	NS	NS	NS	AB	NS	AB	NS	0.7	NS	NS	NS	NS	70	390	170
Jun-89	NS	NS	NS	NS	NS	NS	NS	NI	NI	NS	NS	NS	AB	NS	AB	NS	NS	NS	NS	NS	NS	110	NS	130
Oct-89	NS	NS	NS	NS	NS	NS	NS	NI	NI	NS	NS	NS	AB	NS	AB	NS	NS	NS	NS	NS	NS	NS	NS	150
Jan-90	NS	NS	NS	NS	NS	300	NS	NI	NI	NS	NS	NS	NS	NS	NS	ND	NS	NS	NS	NS	NS	NS	NS	NS
Apr-90	NS	NS	NS	28	190	190	NS	NI	NI	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5	NS	120
Jul-90	NS	NS	NS	NS	NS	NS	NS	NI	NI	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Oct-90	NS	NS	NS	44	210	180	NS	NI	NI	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	150
Jan-91	NS	NS	NS	NS	NS	NS	220	NI	NI	NS	NS	NS	NS	NS	NS	NS	ND	2	NS	NS	NS	NS	NS	NS
Apr-91	NS	NS	NS	NS	190	130	NS	NI	NI	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	38	NS	130
Jul-91	NS	NS	NS	NS	NS	NS	NS	NS	NI	NS	NS	NS		NS		NS	NS	NS	NS	NS	NS	NS	NS	NS
Oct-91	NS	520	NS	7.5	180	110	NS	NS	NI	NS	NS	NS		NS		NS	NS	NS	NS	NS	NS	49	NS	240
Jan-92	NS	NS	NS	NS	NS	NS	89	NS	NI	NS	NS	NS		NS		NS	1.4	NS	NS	NS	NS	NS	NS	NS

TABLE A-I
HISTORICAL TRICHLOROETHENE CONCENTRATIONS
915 DEGUIGNE DRIVE
SUNNYVALE, CALIFORNIA

Concentrations reported in micrograms per liter (µg/L)

	A/B1-Zone Wells		B1-Zone Wells										B2-Zone Wells									B3-Zone Well
Date	6-S/D	7-S/D	9-D	10-D	19-D	20-D	24-D	31-D	40-D	41-D	49-D	51-D	11-DD	18-DD	20-DD	32-DD	42-DD	43-DD	44-DD	45-DD	49-DD	50-DDD
Feb-82	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Mar-82	18	620	1000	56	NS	NS	NS	NS	NS	NS	NS	NS	30	NS	NS	NS	NS	NS	NS	NS	NS	NS
Apr-82	NS	NS	NS	NS	69	200	5	NS	NS	NS	NS	NS	NS	380	61	NS	NS	NS	NS	NS	NS	NS
May-82	NS	NS	NS	NS	NS	NS	NS	29	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Jun-82	NS	NS	3100	5	NS	1800	NS	NS	NS	NS	NS	NS	32	430	4	86	NS	NS	NS	NS	NS	NS
Aug-82	31	560	6600	130	NS	2200	NS	61	NS	NS	NS	NS	5	NS	2	140	NS	NS	NS	NS	NS	NS
May-83	NS	NS	650	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Jul-83	NS	NS	NS	ND	5	NS	NS	NS	NS	NS	NS	NS	NS	2600	NS	NS	NS	NS	NS	NS	NS	NS
Sep-83	60	NS	NS	1	40	840	NS	NS	30	810	NS	NS	6	NS	ND	NS	NS	NS	NS	NS	NS	NS
Mar-84	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Jun-84	NS	NS	NS	ND	ND	NS	ND	NS	NS	NS	NS	NS	ND	1240	NS	NS	NS	NS	NS	NS	NS	NS
Jul-84	NS	NS	NS	ND	ND	NS	ND	NS	NS	NS	NS	NS	NS	2900	NS	NS	NS	NS	NS	NS	NS	NS
Aug-84	NS	1600	NS	ND	2	NS	ND	NS	12	NS	NS	NS	ND	1400	NS	18	NS	NS	NS	NS	NS	NS
Sep-84	220	NS	NS	ND	7	1460	NS	NS	NS	430	NS	NS	ND	590	ND	27	NS	NS	NS	NS	NS	NS
Oct-84	170	1100	NS	2	4	970	NS	NS	NS	NS	NS	NS	ND	1600	NS	NS	NS	NS	NS	NS	NS	NS
Nov-84	300	NS	NS	NS	NS	NS	NS	NS	4	880	NS	NS	NS	NS	NS	9	NS	NS	NS	NS	NS	NS
Dec-84	140	NS	NS	NS	NS	1300	NS	NS	6	NS	NS	NS	13	1400	NS	9	NS	NS	NS	NS	NS	NS
Jan-85	NS	NS	NS	8	6	NS	NS	NS	NS	690	NS	NS	30	1200	9	5	NS	NS	NS	NS	NS	NS
Feb-85	220	1400	NS	NS	NS	1200	70	NS	NS	NS	NS	NS	65	1500	NS	NS	NS	NS	NS	NS	NS	NS
Mar-85	NS	NS	NS	NS	12	NS	34	NS	5	1300	NS	NS	81	1600	ND	NS	NS	NS	NS	NS	NS	NS
Apr-85	147	1300	2800	10	13	NS	37	190	NS	NS	NS	NS	49	1400	NS	NS	NS	NS	NS	NS	NS	NS
May-85	NS	NS	NS	NS	20	NS	1000	200	NS	740	NS	NS	130	140	2	720	NS	NS	NS	NS	NS	NS
Jun-85	NS	NS	NS	6	3	NS	160	250	6	1040	NS	NS	180	1550	NS	1000	NS	NS	NS	NS	NS	NS
Jul-85	NS	NS	NS	9	NS	NS	250	NS	NS	1390	NS	NS	180	590	NS	770	NS	NS	NS	NS	NS	NS
Aug-85	NS	NS	3400	10	1	1600	330	NS	9	NS	NS	NS	220	1900	ND	1140	NS	NS	NS	NS	NS	NS
Oct-85	411	NS	NS	13	NS	NS	296	NS	NS	889	NS	NS	273	1308	1	828	NS	NS	NS	NS	NS	NS
Dec-85	NS	NS	4500	8.3	4.8	NS	160	NS	40	980	NS	NS	240	1200	3.3	760	ND	3500	NS	NS	NS	NS
Feb-86	NS	NS	NS	14	NS	NS	360	NS	NS	NS	NS	NS	240	1000	NS	NS	ND	2400	NS	NS	NS	NS
Apr-86	NS	NS	4000	NS	NS	1000	170	ND	23	850	NS	NS	170	1500	2.7	NS	1.3	1500	NS	NS	NS	NS
Jun-86	NS	1100	3000	NS	3.3	NS	470	250	NS	NS	NS	NS	470	1500	8.3	NS	0.7	3000	NS	NS	NS	NS
Aug-86	NS	NS	7200	NS	2.1	NS	390	270	83	1200	NS	NS	430	1800	4.9	NS	1.2	260	NS	NS	NS	NS
Oct-86	NS	NS	NS	3.7	13	NS	NS	NS	110	NS	NS	NS	190	1300	6.2	NS	NS	2200	NS	NS	NS	NS
Dec-86	NS	NS	NS	11	2.9	NS	490	NS	26	1600	NS	NS	220	830	5.2	NS	1.3	2900	ND	ND	NS	NS
Feb-87	18	NS	2400	NS	NS	NS	360	110	NS	1300	NS	NS	170	650	NS	NS	0.8	1000	ND	ND	NS	NS
Apr-87	NS	NS	3800	11	4	NS	550	NS	72	NS	NS	NS	180	610	NS	890	1	1700	ND	1	NS	NS
Jun-87	21	NS	3500	10	NS	NS	NS	NS	75	1200	NS	NS	130	500	3	800	1	2000	ND	ND	NS	NS
Aug-87	NS	NS	NS	17	NS	NS	660	100	NS	NS	NS	NS	80	320	ND	NS	1	2200	ND	ND	NS	NS
Oct-87	80	NS	2000	30	2	NS	420	27	110	NS	NS	NS	41	560	NS	NS	2	380	ND	ND	NS	NS
Dec-87	NS	NS	2200	NS	NS	600	NS	NS	NS	700	NS	NS	22	240	NS	NS	NS	1000	ND	1	NS	NS
Mar-88	NS	NS	2200	NS	NS	850	170	NS	42	850	NS	NS	9	120	22	NS	NS	200	NS	NS	NS	NS
Jun-88	NS	NS	1100	140	NS	NS	190	63	63	530	NS	NS	NS	180	NS	570	NS	NS	ND	ND	NS	NS
Sep-88	NS	NS	NS	130	9.6	NS	NS	NS	58	830	NS	NS	11	180	1.4	580	4.1	160	ND	ND	NS	NS
Dec-88	NS	NS	NS	125	15	NS	70	NS	42	NS	23	NS	10	130	NS	390	4	790	ND	ND	ND	NS
Mar-89	23	NS	NS	220	NS	NS	45	8.2	NS	NS	NS	NS	8.5	160	NS	610	2.7	100	ND	ND	NS	NS
Jun-89	20	1100	NS	88	18	610	NS	29	21	540	6.3	NS	11	260	19	460	3.5	840	0.8	1.2	ND	NS
Oct-89	14	NS	NS	NS	NS	NS	NS	NS	NS	NS	37	ND	11	450	4	NS	3	460	ND	1	ND	ND
Jan-90	NS	550	NS	48	16	NS	NS	NS	10	NS	4	NS	2	180	6	410	2	55	ND	1	ND	NS
Apr-90	20	NS	NS	35	NS	370	5	3	10	NS	6	ND	13	40	6	540	ND	650	ND	1	ND	ND
Jul-90	NS	850	NS	21	9	NS	NS	NS	11	990	ND	NS	2	140	16	420	2	99	1	1	ND	NS
Oct-90	24	ND	NS	41	NS	800	49	7	18	2300	6	ND	10	68	32	450	3	62	ND	3	ND	ND
Jan-91	NS	910	NS	41	39	29	NS	NS	12	2800	2	NS	8	200	29	330	1	66	ND	1	ND	NS
Apr-91	15	NS	NS	20	NS	560	54	9	15	2000	3	ND	9	98	9	420	1	78	ND	5	3	ND
Jul-91	NS	610		37	65	NS	NS	NS	25	4300	4	NS	27	26	59	470	1	76	ND	7	ND	NS
Oct-91	19	NS		24	NS	280	70	8.9	27	1000	ND	6.6	6.3	58	56	420	2	110	ND	10	0.8	0.6
Jan-92	NS	630		34	77	NS	NS	NS	18	1200	2.2	NS	6.9	82	48	460	1.2	68	ND	9	ND	NS

TABLE A-I
HISTORICAL TRICHLOROETHENE CONCENTRATIONS
915 DEGUIGNE DRIVE
SUNNYVALE, CALIFORNIA

Concentrations reported in micrograms per liter (µg/L)

	Extraction Wells									A-Zone Wells													
Date	EW-1	EW-2	EW-3	EW-4	EW-5	EW-6	EW-7	EW-8	EW-9	1-S	2-S	3-S	4-S	8-S	9-S	11-S	12-S	18-S	19-S	24-S	31-S	40-S	41-S	49-S
Apr-92	NS	NS	NS	NS	89	85	NS	NS	NI	NS	NS	NS		NS		NS	NS	NS	NS	NS	NS	22	NS	630
Jul-92	NS	NS	NS	NS	NS	NS	380	NS	NI	NS	NS	NS		NS		NS	NS	NS	NS	NS	NS	NS	NS	NS
Oct-92	NS	NS	NS	NS	120	150	NS	160	20	NS	NS	NS		NS		NS	NS	NS	NS	NS	NS	30	NS	180
Jan-93	NS	NS	NS	NS	NS	NS	490	NS	6.1	ND	NS	ND		100		NS	NS	NS	NS	NS	ND	12	NS	180
Apr-93	NS	NS	NS	NS	NS	140	170	170	59	ND	NS	ND		120		NS	ND	NS	NS	NS	14	35	130	140
Jul-93	NS	NS	NS	NS	NS	NS	320	NS	62	ND	NS	ND		120		NS	ND	NS	NS	NS	23	60	NS	150
Oct-93	NS	280	NS	5	84	170	NS	170	44	NS	NS	ND		120		NS	NS	NS	NS	NS	13	NS	NS	140
Jan-94	NS	NS	2.6	NS	NS	NS	300	NS	66	NS	NS	NS		96		NS	NS	NS	NS	NS	9.6	NS	NS	NS
Apr-94	NS	140	NS	2.7	37	48	NS	140	58	ND	NS	ND		110		NS	NS	NS	NS	NS	8.7	44	NS	NS
Jul-94	5.6	NS	1.1	NS	NS	NS	270	NS	50	ND	NS	ND		99		NS	NS	NS	NS	NS	18	NS	NS	130
Oct-94	NS	240	NS	5	76	130	NS	170	67	ND	NS	ND		120		2.2	NS	NS	NS	NS	17	NS	9.5	NS
Jan-95	7.7	NS	ND	NS	NS	NS	190	NS	49	ND	NS	ND		92		NS	NS	NS	NS	14	6.1	NS	97	NS
Apr-95	NS	350	NS	5.3	72	120	NS	150	48	ND	NS	ND		71		1	NS	NS	NS	NS	13	NS	210	NS
Jul-95	12	NS	ND	NS	NS	NS	220	NS	NS	ND	NS	ND		58		NS	NS	NS	NS	NS	17	46	28	28
Oct-95	NS	270	NS	5.6	69	120	NS	150	60	ND	NS	ND		97		NS	NS	NS	NS	NS	7.2	NS	11	NS
Apr-96	6.9	300	ND	4.3	78	100	190	130	44	ND	NS	ND		65		ND	DRY	DRY	DRY	DRY	7.9	25	140	110
Oct-96	NS	350	NS	NS	55	100	240	140	39	NS	NS	NS		NS		NS	NS	NS	NS	NS	NS	NS	11	130
Apr-97	5.5	200	ND	4.6	73	140	160	120	34	ND	NS	ND		23		ND	NS	NS	NS	NS	8.2	20	73	91
Oct-97	8.4	200	0.61	4.7	80	110	200	120	32	ND	NS	ND		46		NS	NS	NS	NS	NS	4.6	NS	190	NS
Apr-98	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	24	NS		NS		ND	NS	1.3	NS	NS	NS	13	65	NS
Oct-98	NS	NS	NS	NS	NS	110	NS	NS	NS	ND	NS	ND		53		0.8	NS	NS	NS	NS	13	23	140	82
Oct-99	NS	NS	NS	NS	110	86	250	160	41	ND	NS	ND		49		NS	NS	NS	NS	NS	20	10	210	93
Jan-00	NS	NS	NS	NS	NS	82	NS	140	NS	NS	NS	NS		NS		NS	NS	NS	NS	NS	12	NS	NS	NS
Mar-00	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS		NS		NS	NS	NS	NS	NS	14	NS	NS	NS
Jun-00	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS		NS		NS	NS	NS	NS	NS	NS	NS	NS	NS
Oct-00	NS	NS	NS	NS	110	65	NS	110	33	ND	NS	ND		37		0.6	NS	NS	NS	NS	NS	NS	200	97
Oct-01	NS	NS	NS	NS	100	70	200	130	38	0.5	NS	ND		29		1.5	NS	0.9	NS	NS	13	NS	280	110
Oct/Nov-02	NS	NS	NS	NS	96	65	150	130	36	ND	NS	ND		44		0.6	NS	1.5	NS	NS	11	28	280	92
Oct-03	NS	NS	NS	NS	99	57	210	120	35	ND	NS	ND		52		0.8	NS	1.9	NS	NS	11	17	310	43
Oct-04	NS	NS	NS	NS	81	110	180	100	28	ND	130	ND		29		0.9	NS	2.2	ND	NS	6.4	160	50	35
Oct-05	96	200	0.8	15	61	69	160	100	42	ND	95	ND		21		1.5	NS	3.1	ND	NS	10	280	230	36
Oct-06	85	230	ND	5.7	200	51	200	110	36	ND	120	ND		17		1.4	NS	4.1	3.3	NS	12	180	300	31
Oct-07	69	250	ND	36	96	58	220	95	32	ND	160	ND		16		1.7	NS	2.5	ND	NS	9	250	250	30
Oct-08	77	170	1.6	6.9	70	57	230	90	35	ND	150	ND		13		1.5	NS	3.3	58	NS	8.5	200	370	26
Oct-09	89	170	0.8	5.9	68	52	140	110	34	ND	130	ND		9.0		1.8	NS	2.8	1.2	NS	6.9	230	210	30
Oct/Nov-10	65	140	ND	5.2	69	60	140	87	30	ND	130	ND		9.6		1.6	NS	2.4	2.0	NS	5.3	220	210	22
Oct/Nov-11	95	130	0.8	5.6	67	56	120	84	29	ND	100	ND		13		1.4	NS	2.5	3.7	NS	5.8	100	210	18
Oct/Nov-12	83	130	ND	7.4	62	58	120	98	32	ND	110	ND		13		1.5	NS	3.2	4.7	NS	7.5	100	240	24
Oct/Nov-13	93	130	1	4.6	55	57	120	97	33	ND	120	ND		12		1.8	NS	3.3	8.7	NS	6	110	190	31

ND	Not Detected
NI	Not Installed
NS	Not Sampled
	Well Destroyed

TABLE A-I
HISTORICAL TRICHLOROETHENE CONCENTRATIONS
915 DEGUIGNE DRIVE
SUNNYVALE, CALIFORNIA

Concentrations reported in micrograms per liter (µg/L)

	A/B1-Zone Wells		B1-Zone Wells										B2-Zone Wells									B3-Zone Well
Date	6-S/D	7-S/D	9-D	10-D	19-D	20-D	24-D	31-D	40-D	41-D	49-D	51-D	11-DD	18-DD	20-DD	32-DD	42-DD	43-DD	44-DD	45-DD	49-DD	50-DDD
Apr-92	15	NS		39	NS	240	49	9.4	28	520	3.8	2.7	8.4	75	120	280	1.6	52	ND	28	4.8	ND
Jul-92	NS	660		37	81	NS	NS	NS	34	1000	4.9	NS	8.6	74	220	550	3.8	58	2.3	65	ND	NS
Oct-92	17	NS		32	NS	200	63	7.3	50	820	4.4	0.7	8.2	9.7	80	230	3.5	39	2.2	13	0.7	ND
Jan-93	NS	1400		NS	NS	NS	NS	NS	NS	2600	NS	NS	NS	34	83	NS	NS	NS	NS	14	NS	NS
Apr-93	NS	NS		120	83	500	85	5.5	78	2300	1.5	ND	3.8	67	69	360	2.1	73	0.7	21	ND	ND
Jul-93	NS	210		NS	NS	NS	NS	NS	NS	870	NS	NS	NS	58	360	NS	NS	NS	NS	11	NS	NS
Oct-93	17	NS		NS	NS	250	NS	5.8	NS	1100	NS	NS	NS	130	270	270	NS	41	ND	9.2	NS	1.8
Jan-94	NS	340		NS	NS	NS	NS	NS	NS	1300	NS	NS	NS	41	220	NS	NS	NS	ND	7.7	NS	NS
Apr-94	16	NS		85	45	120	30	ND	52	730	0.96	ND	0.62	47	230	280	ND	ND	ND	ND	ND	ND
Jul-94	NS	240		NS	NS	NS	NS	NS	NS	690	NS	NS	NS	37	240	NS	NS	NS	NS	5	NS	NS
Oct-94	NS	NS		NS	NS	190	NS	5	NS	40	NS	NS	NS	45	47	230	NS	25	ND	4.8	NS	ND
Jan-95	NS	170		NS	NS	NS	NS	NS	NS	540	NS	NS	NS	24	31	NS	NS	NS	NS	6.8	NS	NS
Apr-95	12	NS		88	110	200	64	7.7	70	480	0.7	0.6	8.8	14	220	230	12	21	0.7	3.1	0.5	ND
Jul-95	NS	420		NS	NS	NS	NS	NS	NS	480	NS	NS	NS	17	310	NS	NS	NS	NS	3.8	NS	NS
Oct-95	NS	NS		NS	NS	340	NS	6.8	NS	690	NS	NS	NS	9.7	100	270	NS	27	ND	5.5	NS	ND
Apr-96	12	220		110	79	190	39	4.9	32	270	2	ND	2.9	11	64	220	14	16	ND	1.1	ND	ND
Oct-96	NS	460		NS	NS	140	NS	NS	NS	790	NS	NS	NS	18	NS	190	NS	18	ND	1.2	NS	NS
Apr-97	9.1	230		160	65	37	39	5.5	31	450	2.8	ND	3	13	190	190	15	13	ND	1.7	ND	ND
Oct-97	11	81		170	120	100	28	9.1	22	190	1.7	ND	13	13	140	200	13	12	ND	1.8	0.5	ND
Apr-98	NS	NS		97	NS	NS	NS	NS	NS	140	NS	NS	NS	NS	NS	NS	20	NS	NS	NS	NS	NS
Oct-98	NS	NS		200	80	59	NS	NS	47	250	2.4	ND	6	8.4	83	210	26	6.5	NS	3	ND	ND
Oct-99	NS	NS		180	74	220	NS	NS	28	230	ND	ND	48	86	38	190	16	ND	NS	ND	ND	ND
Jan-00	NS	NS		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	80	NS	NS	13	NS	NS	NS	NS	NS
Mar-00	NS	NS		NS	NS	NS	NS	NS	NS	NS	NS	NS	4.1 *	8.4	NS	NS	20	NS	NS	NS	NS	NS
Jun-00	NS	NS		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	52	NS	NS	NS	NS	NS	NS	NS	NS
Oct-00	NS	NS		180	73	180	NS	NS	51	180	1.8	ND	4.3	60	280	160	20	6.9	NS	0.6	ND	ND
Oct-01	NS	NS		180	75	92	NS	NS	45	220	1.4	1.8	5.2	42	280	200	21	6.8	NS	ND	ND	ND
Oct/Nov-02	NS	NS		170	60	270	NS	NS	56	230	3	0.6	3	11	210	250	29	9.1	NS	9.6	ND	ND
Oct-03	NS	NS		150	51	250	NS	NS	5	240	2	ND	7.1	4	220	200	20	5.4	NS	ND	ND	ND
Oct-04	NS	NS		91	7.1	83	NS	NS	32	220	3.3	ND	11	7.5	250	160	19	3.9	NS	ND	ND	ND
Oct-05	NS	NS		68	1.2	85	NS	NS	120	250	1.4	ND	26	40	270	220	7.9	3.3	NS	ND	ND	ND
Oct-06	NS	NS		47	0.8	19	NS	NS	65	230	1.7	ND	18	6.3	160	300	29	7	NS	ND	ND	ND
Oct-07	NS	NS		52	2.6	7.6	NS	NS	51	88	1.2	ND	4.3	6.7	180	170	19	3.4	NS	ND	ND	ND
Oct-08	NS	NS		45	1.6	13	NS	NS	40	230	ND	ND	14	ND	150	180	29	3.4	NS	ND	ND	ND
Oct-09	NS	NS		47	2.7	8.8	NS	NS	86	210	0.8	ND	11	11	100	120	31	2.9	NS	ND	ND	ND
Oct/Nov-10	NS	NS		39	2.9	44	NS	NS	55	280	1.0	ND	39	35	120	150	19	2.5	NS	ND	ND	ND
Oct/Nov-11	NS	NS		39	4.6	130	NS	NS	80	220	0.9	ND	17	10	160	140	11	2.7	NS	0.8	ND	ND
Oct/Nov-12	NS	NS		33	10	190	NS	NS	73	130	0.6	ND	28	5.5	180	130	10	3.8	NS	ND	ND	ND
Oct/Nov-13	NS	NS		35	15	150	NS	NS	73	200	ND	ND	20	37	130	130	15	2.4	NS	2	ND	ND

ND	Not Detected
NI	Not Installed
NS	Not Sampled
	Well Destroyed

TABLE A-II
HISTORICAL cis-1,2-DICHLOROETHENE CONCENTRATIONS
915 DEGUIGNE DRIVE
SUNNYVALE, CALIFORNIA

Concentrations reported in micrograms per liter (µg/L)

	Extraction Wells									A-Zone Wells													
Date	EW-1	EW-2	EW-3	EW-4	EW-5	EW-6	EW-7	EW-8	EW-9	1-S	2-S	3-S	4-S	8-S	9-S	11-S	12-S	18-S	19-S	24-S	31-S	40-S	41-S
Jan-93	NS	NS	NS	NS	NS	NS	89	NS	ND	ND	NS	ND		23		NS	NS	NS	NS	NS	4.7	0.6	NS
Apr-93	NS	NS	NS	NS	NS	488.4	192.1	17	2.5	ND	NS	ND		25		NS	ND	NS	NS	NS	40	3	13
Jul-93	NS	NS	NS	NS	NS	NS	191.7	NS	5.1	ND	NS	ND		29		NS	ND	NS	NS	NS	72	8.8	NS
Oct-93	NS	182.3	NS	30	231.9	617.9	NS	18	5.7	NS	NS	ND		23		NS	NS	NS	NS	NS	25	NS	NS
Jan-94	NS	NS	ND	NS	NS	NS	141.4	NS	6.2	ND	ND	ND		18		NS	NS	NS	NS	NS	25	NS	NS
Apr-94	NS	104.4	NS	30	164.5	299.2	NS	16	6.4	ND	NS	ND		27		NS	NS	NS	NS	NS	18	1.9	NS
Jul-94	5.9	NS	ND	NS	NS	NS	101.6	NS	16	ND	NS	ND		16		NS	NS	NS	NS	NS	37	NS	NS
Oct-94	NS	172.4	NS	43.6	172.4	256.4	NS	21	7.8	ND	NS	ND		27		ND	NS	NS	NS	NS	35	NS	1.3
Jan-95	8.7	NS	ND	NS	NS	NS	24	NS	8.1	ND	NS	ND		18		NS	NS	NS	NS	ND	15	NS	20
Apr-95	NS	141.2	NS	44	132.4	441.8	NS	15	6.5	ND	NS	ND		55.6		ND	NS	NS	NS	NS	25	NS	24
Jul-95	14	NS	ND	NS	NS	NS	20	NS	7	ND	NS	ND		20		NS	NS	NS	NS	NS	39	2.3	82
Oct-95	NS	73	NS	43	100	420	NS	13	ND	ND	NS	ND		25		NS	NS	NS	NS	NS	16	NS	45
Apr-96	6.5	118.6	ND	37	131.2	496.1	24	15	5.9	ND	NS	ND		24		ND	NS	NS	NS	NS	17	0.5	120.5
Oct-96	NS	141.9	NS	NS	93	464.9	6.2	5.2	6	NS	NS	NS		NS		NS	NS	NS	NS	NS	NS	NS	70.7
Apr-97	9.4	120	ND	43	193.8	630	27	15	6.7	ND	NS	ND		102.2		ND	NS	NS	NS	NS	19	0.9	171.9
Oct-97	8.9	111.8	1.8	32	152	648	15	26	7.3	ND	NS	ND		58.6		NS	NS	NS	NS	NS	NS	NS	39
Apr-98	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND	NS		NS		ND	NS	ND	NS	NS	NS	1.4	18
Oct-98	NS	NS	NS	NS	NS	490	NS	NS	NS	ND	NS	ND		210		ND	NS	NS	NS	NS	32	2.2	33
Oct-99	NS	NS	NS	NS	180	600	18	23	11	ND	NS	ND		171		NS	NS	NS	NS	NS	130	ND	61
Jan-00	NS	NS	NS	NS	NS	486	NS	18	NS	NS	NS	NS		NS		NS	NS	NS	NS	NS	69	NS	NS
Mar-00	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS		NS		NS	NS	NS	NS	NS	80	NS	NS
Jun-00	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS		NS		NS	NS	NS	NS	NS	NS	NS	NS
Oct-00	NS	NS	NS	NS	200	430	17	33	11	ND	NS	ND		71		ND	NS	NS	NS	NS	NS	NS	77
Oct-01	NS	NS	NS	NS	210	390	16	21	8.2	ND	NS	ND		57		ND	NS	ND	NS	NS	110	NS	81
Oct/Nov-02	NS	NS	NS	NS	243	356	13	25	20	ND	NS	ND		202		ND	NS	ND	NS	NS	131	6.1	112
Oct-03	NS	NS	NS	NS	180	210	19	23	23	ND	NS	ND		170		ND	NS	ND	NS	NS	130	6.8	110
Oct-04	NS	NS	NS	NS	150	140	17	21	24	ND	51	ND		30		ND	NS	ND	3.3	NS	71	73	45
Oct-05	50	112	ND	121	122	112	28	16	15	ND	15	ND		11		ND	NS	ND	51	NS	83	71	99
Oct-06	53	78	ND	112	22	113	19	18	16	ND	44	ND		7.9		ND	NS	5	48	NS	101	162	153
Oct-07	36.8	78.2	ND	28	66	101	15	14	13	ND	56	0.7		7.9		ND	NS	4.4	31	NS	111	69	142
Oct-08	48.7	56	1	171.3	143.2	76.4	8.8	23	13	ND	56.9	1.1		5.5		ND	NS	5.8	16	NS	111.1	48.5	194.5
Oct-09	45.8	50	0.6	233.8	132	77.5	11	15	16	ND	39	0.8		4.1		ND	NS	5.6	26.2	NS	90	45	173.1
Oct/Nov-10	34	38	ND	179.6	94.5	80.5	12	9.4	13	ND	46	0.7		7.7		0.8	NS	5.8	31.4	NS	70	37	192.9
Oct/Nov-11	40.8	39	0.8	243.6	152.1	70.4	11	9.7	13	ND	39	1.4		8.8		0.6	NS	6.7	41.7	NS	97.9	68.1	172.1
Oct/Nov-12	47	44	ND	220	140	75	12	13	13	ND	36	7.6		3.7		ND	NS	2.9	31	NS	100	59	150
Oct/Nov-13	40	39	1.1	160	110	63	13	8.9	16	ND	43	12		4.8		ND	NS	2.6	40	NS	86	68	170

ND	Not Detected
NI	Not Installed
NS	Not Sampled
	Well Destroyed

TABLE A-II
HISTORICAL cis-1,2-DICHLOROETHENE CONCENTRATIONS
915 DEGUIGNE DRIVE
SUNNYVALE, CALIFORNIA

Concentrations reported in micrograms per liter (µg/L)

		A/B1-Zone Wells		B1-Zone Wells					B1-Zone Wells					B2-Zone Wells									B3-Zone Well
Date	49-S	6-S/D	7-S/D	9-D	10-D	19-D	20-D	24-D	31-D	40-D	41-D	49-D	51-D	11-DD	18-DD	20-DD	32-DD	42-DD	43-DD	44-DD	45-DD	49-DD	50-DDD
Jan-93	686.2	NS	362.9		NS	NS	NS	NS	NS	NS	160	NS	NS	NS	1.9	53	NS	NS	NS	NS	ND	NS	NS
Apr-93	458.8	NS	NS		51	170	152.2	25	68	210	8.6	4.5	ND	ND	5.7	57	131.4	9.6	ND	ND	ND	ND	ND
Jul-93	576.8	NS	131.5		NS	NS	NS	NS	NS	NS	192.2	NS	NS	NS	6	262.5	NS	NS	NS	NS	ND	NS	NS
Oct-93	636.5	40	NS		NS	NS	302.5	NS	44	NS	241.7	NS	NS	NS	13	251.7	272	NS	0.9	ND	ND	NS	ND
Jan-94	NS	NS	281		NS	NS	NS	NS	NS	NS	402	NS	NS	NS	3.7	170	NS	NS	NS	ND	ND	NS	ND
Apr-94	NS	29	NS		23	5.3	112	13	78	160	130	4.5	ND	ND	4.6	143	243	22	ND	ND	ND	ND	ND
Jul-94	446.7	NS	270.5		NS	NS	NS	NS	NS	NS	95.1	NS	NS	NS	4	203.2	NS	NS	NS	NS	ND	NS	ND
Oct-94	NS	NS	NS		NS	NS	243.5	NS	49	NS	NS	NS	NS	NS	4.2	160	141.1	NS	ND	ND	ND	NS	ND
Jan-95	NS	NS	235.5		NS	NS	NS	NS	NS	NS	78.7	NS	NS	NS	4	57	NS	NS	NS	NS	ND	NS	NS
Apr-95	NS	51	NS		61	12	142	17	52.6	66	60	2.8	ND	0.8	2.3	273.4	131.3	171.5	ND	ND	ND	ND	ND
Jul-95	326	NS	253.9		NS	NS	NS	NS	NS	NS	0.7	NS	NS	NS	1.8	220	NS	NS	NS	NS	ND	NS	NS
Oct-95	NS	NS	NS		NS	NS	260	NS	54	NS	70	NS	NS	NS	0.8	120	91	NS	ND	ND	ND	NS	ND
Apr-96	295.3	42	175.2		42	14	202.9	15	46	62	69	8.4	ND	ND	0.7	70	87.5	160	ND	ND	ND	ND	ND
Oct-96	551	NS	365.4		NS	NS	34	NS	NS	NS	100.7	NS	NS	NS	0.6	NS	30	NS	ND	ND	ND	NS	NS
Apr-97	326.3	26	163.5		48	11	19	11	44	50	66	7.5	ND	ND	1.3	111.8	59.3	140	ND	ND	ND	ND	ND
Oct-97	NS	51	94.1		48.67	13	242.7	9.7	55	58	16	5.7	ND	1.1	1.2	81.1	67.53	281.9	ND	ND	ND	ND	ND
Apr-98	NS	NS	NS		23	NS	NS	NS	NS	NS	12	NS	NS	NS	NS	NS	NS	230	NS	NS	NS	NS	NS
Oct-98	280	NS	NS		49	15	150	NS	NS	62	28	6.1	ND	ND	1.2	64	54	200	ND	NS	ND	ND	ND
Oct-99	432	NS	NS		48	18	126.9	NS	NS	62	57	6.6	ND	14	28	170	37	300	ND	NS	ND	ND	ND
Jan-00	NS	NS	NS		NS	NS	NS	NS	NS	NS	NS	NS	NS	ND	23	NS	NS	247.2	NS	NS	NS	NS	NS
Mar-00	NS	NS	NS		NS	NS	NS	NS	NS	NS	NS	NS	NS	ND	ND	NS	NS	280	NS	NS	NS	NS	NS
Jun-00	NS	NS	NS		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	16	NS	NS	NS	NS	NS	NS	NS	NS
Oct-00	450	NS	NS		62	25	94	NS	NS	NS	77	5.3	ND	1.4	21	160	41	370	ND	NS	ND	ND	ND
Oct-01	440	NS	NS		98	28	74	NS	NS	94	74	4.6	ND	3.9	16	150	45	360	ND	NS	ND	ND	ND
Oct/Nov-02	254	NS	NS		141	24	83	NS	NS	72	98	5.3	ND	3.8	2.9	101	38	404	ND	NS	2.6	ND	ND
Oct-03	61	NS	NS		170	15	78	NS	NS	76	95	3.8	ND	17	1.1	100	54	420	ND	NS	ND	ND	ND
Oct-04	36	NS	NS		250	1.9	110	NS	NS	40	93	4.4	ND	17	2.9	110	40	400	ND	NS	ND	ND	ND
Oct-05	18	NS	NS		242	2	15	NS	NS	75	78	2	ND	36	16	73	70	98	ND	NS	ND	ND	ND
Oct-06	10	NS	NS		332	4.7	3.4	NS	NS	55	133	2.4	ND	42	5	70	64	395	ND	NS	ND	ND	ND
Oct-07	6.4	NS	NS		380	6.6	1.7	NS	NS	85	296	1.9	ND	17	1.4	73	47	353	ND	NS	ND	ND	ND
Oct-08	5.9	NS	NS		290	15	3.3	NS	NS	66.8	183.5	1	ND	7.2	29.1	68	13	385.7	ND	NS	ND	ND	ND
Oct-09	19	NS	NS		323.2	29.8	1.3	NS	NS	53.9	224.1	1.5	ND	6.9	5.1	67.2	51.6	347.5	ND	NS	ND	ND	ND
Oct/Nov-10	7.0	NS	NS		392.8	26.9	14.0	NS	NS	37	246.7	1.6	ND	17	11	132.3	40.7	413	ND	NS	ND	ND	ND
Oct/Nov-11	5.1	NS	NS		342.9	27.7	51	NS	NS	44.8	193.8	1.6	ND	12.5	4.1	68.7	56	325.6	ND	NS	ND	ND	ND
Oct/Nov-12	5.9	NS	NS		340	25	72	NS	NS	33	200	1.2	ND	8	2.7	65	30	350	ND	NS	ND	ND	ND
Oct/Nov-13	12	NS	NS		310	28	52	NS	NS	47	180	1.1	ND	20	10	70	35	290	ND	NS	ND	ND	ND

ND	Not Detected
NI	Not Installed
NS	Not Sampled
	Well Destroyed

TABLE A-III
HISTORICAL TOTAL VOLATILE ORGANIC COMPOUND CONCENTRATIONS
915 DEGUIGNE DRIVE
SUNNYVALE, CALIFORNIA

Concentrations reported in micrograms per liter (µg/L)

	Extraction Wells									A-Zone Wells						A-Zone Wells								
Date	EW-1	EW-2	EW-3	EW-4	EW-5	EW-6	EW-7	EW-8	EW-9	1-S	2-S	3-S	4-S	8-S	9-S	11-S	12-S	18-S	19-S	24-S	31-S	40-S	41-S	49-S
Jan-91	NS	NS	NS	NS	NS	NS	220	NS	NI	NS	NS	NS		NS		NS	5	14	NS	NS	NS	NS	NS	NS
Apr-91	NS	NS	NS	NS	337	507	NS	NS	NI	NS	NS	NS		NS		NS	NS	NS	NS	NS	NS	62	NS	522
Jul-91	NS	NS	NS	NS	NS	NS	NS	NS	NI	NS	NS	NS		NS		NS	NS	NS	NS	NS	NS	NS	NS	NS
Oct-91	NS	710	NS	94.5	298	470	NS	NS	NI	NS	NS	NS		NS		NS	NS	NS	NS	NS	NS	60	NS	740
Jan-92	NS	NS	NS	NS	NS	NS	99	NS	NI	NS	NS	0.5		NS		NS	10.1	NS	NS	NS	NS	NS	NS	NS
Apr-92	NS	NS	NS	NS	187	265	NS	NS	NI	NS	NS	NS		NS		NS	NS	NS	NS	NS	NS	26	NS	764
Jul-92	NS	NS	NS	NS	NS	NS	567	NS	NI	NS	NS	NS		NS		NS	NS	NS	NS	NS	NS	NS	NS	NS
Oct-92	NS	NS	NS	NS	363	860	NS	207	28	NS	NS	NS		NS		NS	NS	NS	NS	NS	NS	48	NS	1043
Jan-93	NS	NS	NS	NS	NS	NS	829	NS	6.1	ND	NS	ND		123		NS	NS	NS	NS	NS	4.7	12.6	NS	910.8
Apr-93	NS	NS	NS	NS	NS	679	419.9	216.2	86.7	ND	NS	ND		148		ND	0.8	NS	NS	NS	72.4	39	143	654.6
Jul-93	NS	NS	NS	NS	NS	NS	553.4	NS	92.1	ND	NS	ND		150.7		NS	2.5	NS	NS	NS	111	69.9	NS	770.7
Oct-93	NS	484.6	NS	45.5	356.6	822.3	NS	215.1	68.3	NS	NS	ND		148.9		NS	NS	NS	NS	NS	50.7	NS	NS	806.6
Jan-94	NS	NS	ND	2.6	NS	NS	500.1	NS	89.4	ND	ND	ND		115.5		NS	NS	NS	NS	NS	39.8	NS	NS	NS
Apr-94	NS	259.1	NS	40	232.7	375.3	NS	177.5	80.7	ND	NS	ND		139.3		NS	NS	NS	NS	NS	31.1	45.9	NS	NS
Jul-94	13.6	NS	1.1	NS	NS	NS	576.2	NS	85.9	ND	NS	ND		118.7		NS	NS	NS	NS	NS	65.8	NS	NS	596.4
Oct-94	NS	432.1	NS	57.3	273.1	406.8	NS	214.7	92	ND	NS	ND		148.6		2.2	NS	NS	NS	NS	71.1	NS	20.3	NS
Jan-95	16.4	NS	ND	NS	NS	NS	233.9	NS	69	ND	NS	ND		111.3		NS	NS	NS	NS	14	25.5	NS	119	NS
Apr-95	NS	506.3	NS	58.1	230.1	582.7	NS	187.1	68.3	ND	NS	ND		128.9		1	NS	NS	NS	NS	47.4	NS	236.2	NS
Jul-95	31.6	NS	ND	NS	NS	NS	255	NS	61.8	ND	NS	ND		79.3		NS	NS	NS	NS	NS	69.6	48.3	110.5	432.9
Oct-95	NS	343	NS	55.8	169	540	NS	187	72	ND	NS	0.6		123.2		NS	NS	NS	NS	NS	30.4	NS	56.7	NS
Apr-96	13.4	431.1	ND	47.5	228	608.7	228.3	165	63.4	ND	NS	ND		89.6		ND	NS	NS	NS	NS	28.7	25.5	261.9	419.9
Oct-96	NS	504	NS	NS	156.5	578.4	253.2	145.2	52.6	NS	NS	NS		NS		NS	NS	NS	NS	NS	NS	NS	155.7	699.6
Apr-97	14.9	320	ND	53.2	291	781	210	150	48.7	ND	NS	ND		126.8		ND	NS	NS	NS	NS	36.5	20.9	247.6	426.1
Oct-97	17.3	317.78	2.41	40.8	236.65	771.49	215	163	45.3	1.1	NS	1.0		105.29		NS	NS	NS	NS	NS	23.02	NS	232	NS
Apr-98	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	25.6	NS		NS		ND	NS	1.3	NS	NS	NS	14.4	83	NS
Oct-98	NS	NS	NS	NS	NS	606	NS	NS	NS	0.8	NS	ND		273		0.8	NS	NS	NS	NS	58	25	174	374
Oct-99	NS	NS	NS	NS	348.2	738	282	198.6	60.6	ND	NS	ND		220		NS	NS	NS	NS	NS	162.1	17.6	271	525
Jan-00	NS	NS	NS	NS	NS	640	NS	173	NS	NS	NS	NS		NS		NS	NS	NS	NS	NS	86.5	NS	NS	NS
Mar-00	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS		NS		NS	NS	NS	NS	NS	94	NS	NS	NS
Jun-00	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS		NS		NS	NS	NS	NS	NS	NS	NS	NS	NS
Oct-00	NS	NS	NS	NS	317.3	509	187	146.2	45.4	1.0	NS	1.0		109		1	NS	NS	NS	NS	NS	NS	281	575
Oct-01	NS	NS	NS	NS	316.8	475	216.6	152.9	46.9	1.8	NS	0.8		86.8		1.5	NS	0.9	DRY	NS	127.1	DRY	367.2	567
Oct/Nov-02	NS	NS	NS	NS	363	421	167	164	61	1.0	NS	1.0		247		1	NS	2	DRY	NS	147	37	395	352
Oct-03	NS	NS	NS	NS	320.1	276.3	237	151	62	ND	NS	ND		226.3		ND	NS	ND	DRY	NS	147.4	23.8	436.2	106.3
Oct-04	NS	NS	NS	NS	274.6	291.4	207	128.8	56.7	1.1	182	0.8		59.8		0.9	NS	2.2	3.3	NS	83.1	234.3	141	72.3
Oct-05	145.8	314.8	0.8	139.8	199.7	186.7	196.4	125.2	62.5	1.1	110	ND		32		1.5	NS	3.1	51.4	NS	95.7	350.7	342.9	54.7
Oct-06	138.1	307.7	ND	117.3	229	170.3	225.7	134.1	56.8	1.0	164	ND		24.9		1.4	NS	9.6	51.5	NS	117.8	342.2	462.4	41
Oct-07	105.8	330	ND	64.7	165.1	169.3	246	115.5	50.1	1.0	215.8	0.7		23.9		1.7	NS	6.9	31.1	NS	124.2	319.1	409.1	36.4
Oct-08	125.7	226	2.6	180.8	253.9	124.2	247	117	53	0.7	206.9	1.1		18.5		1.5	NS	9.1	77.4	NS	119.6	248.5	575.9	31.9
Oct-09	134.8	220	1.4	239.7	225	133.4	151	131.6	53.3	0.7	169	0.8		13.1		1.8	NS	8.4	27.4	NS	96.9	275	386.7	49.7
Oct/Nov-10	99	179.2	ND	184.8	199.5	147.8	156.6	100.8	45.6	0.6	176	0.7		17.3		2.4	NS	8.2	33.4	NS	75.3	257	411.1	29.0
Oct/Nov-11	135.8	169	1.6	249.2	400.9	210.8	131	98.6	44.7	0.6	139.9	1.4		21.8		2.0	NS	9.2	45.4	NS	104.3	168.1	387.2	23.1
Oct/Nov-12	130.8	175.9	ND	232.7	377.6	276.6	134.9	116.4	47.7	0.6	146	8.2		16.7		1.5	NS	7.6	36.7	NS	109.1	161.4	401.1	29.9
Oct/Nov-13	133.8	169	2.1	167.1	316.7	205	141.1	111.6	52.2	0.6	165.2	13.3		16.8		1.8	NS	6.7	50.3	NS	92.9	179	366.7	43.6

ND	Not Detected
NI	Not Installed
NS	Not Sampled
	Well Destroyed

TABLE A-III
HISTORICAL TOTAL VOLATILE ORGANIC COMPOUND CONCENTRATIONS
915 DEGUIGNE DRIVE
SUNNYVALE, CALIFORNIA

Concentrations reported in micrograms per liter (µg/L)

	A/B1-Zone Wells		B1-Zone Wells					B1-Zone Wells					B2-Zone Wells									B3-Zone Well
Date	6-S/D	7-S/D	9-D	10-D	19-D	20-D	24-D	31-D	40-D	41-D	49-D	51-D	11-DD	18-DD	20-DD	32-DD	42-DD	43-DD	44-DD	45-DD	49-DD	50-DDD
Jan-91	NS	1250		65	54	NS	NS	NS	62	3120	5	NS	13	200	139	390	3	66	2	2	ND	NS
Apr-91	59	NS		37	NS	760	73	85	65	2220	7	ND	14	98	47	502	3	79	1	17	8	ND
Jul-91	NS	919		61	84	NS	NS	NS	85	4910	9	NS	47	27	137	546	9	79	1	15	0	NS
Oct-91	79.7	NS		54	NS	440	100	87.8	102	1310	6.3	6.6	6.8	58	105.5	708	8.8	110	0	10	0.8	0.6
Jan-92	NS	890		62.6	NS	NS	NS	NS	73.8	1340	5.7	NS	11	83	85.9	640	21.3	68	0.9	18.1	0	NS
Apr-92	61	NS		65	NS	370	91	127	119	714	7	3	8	86	290	436	11	52	ND	35	5	1.0
Jul-92	NS	968		66	101	NS	NS	NS	107	1122	11	NS	13	78	334	845	61	61	5	85	ND	NS
Oct-92	86	NS		76	NS	271	97	108	235	1133	18	1	13	17	159	447	60	43	3	27	1	ND
Jan-93	NS	1864.9		NS	NS	NS	NS	NS	NS	2816.5	NS	NS	NS	35.9	136	NS	NS	NS	NS	34	NS	NS
Apr-93	NS	NS		180.5	262.7	669.9	114.7	98	291	2313.2	6	ND	6	72.7	133.5	519.8	12.9	75.5	1.9	33	ND	ND
Jul-93	NS	352		NS	NS	NS	NS	NS	NS	1188.7	NS	NS	NS	65.3	658.2	NS	NS	NS	NS	17.9	NS	NS
Oct-93	73.6	NS		NS	NS	570.3	NS	64	NS	1383.1	NS	NS	NS	150.1	540.7	598.2	NS	42.7	3.4	15.7	NS	1.8
Jan-94	NS	641.4		NS	NS	NS	NS	NS	NS	1731	NS	NS	NS	46.2	408	NS	NS	NS	ND	13.5	NS	NS
Apr-94	54.2	NS		112.6	52.8	242.2	43.6	90	212.7	867.6	5.5	ND	0.6	51.6	378.1	604.8	22	30	ND	ND	ND	ND
Jul-94	NS	532.2		NS	NS	NS	NS	NS	NS	798.7	NS	NS	NS	41.8	450.7	NS	NS	NS	NS	5.0	NS	NS
Oct-94	NS	NS		NS	NS	443.5	NS	67.6	NS	55.2	NS	NS	NS	50.5	210.6	519.5	NS	26.1	ND	10.3	NS	ND
Jan-95	NS	422		NS	NS	NS	NS	NS	NS	632.2	NS	NS	NS	28	90	NS	NS	NS	NS	9.0	NS	NS
Apr-95	77.5	NS		158.6	132.9	353.4	82.3	75.7	136.7	546.5	3.5	0.6	13	16.3	513.8	388.5	192.4	21	3	6.1	0.5	ND
Jul-95	NS	696.9		NS	NS	NS	NS	NS	NS	554.3	NS	NS	NS	18.8	554.9	NS	NS	NS	NS	7.2	NS	NS
Oct-95	NS	NS		NS	NS	600	NS	73	NS	760	NS	NS	NS	10.5	220	382	NS	27	ND	9.0	NS	ND
Apr-96	61.7	413.1		160.1	100.8	403.4	54	58.8	94	360	10.4	ND	2.9	11.7	136.3	325.5	176.4	16	ND	1.1	ND	ND
Oct-96	NS	845.2		NS	NS	175.6	NS	NS	NS	905.2	NS	NS	NS	18.6	NS	227.5	NS	18	ND	1.2	NS	NS
Apr-97	35.1	405.7		244	82.5	56	51	61	81	525.3	10.3	ND	3	14.3	312	265.7	160	13	ND	1.7	ND	ND
Oct-97	69.6	177.3		228.71	140.7	348.62	37.7	69.6	80	206.7	7.4	ND	15.5	14.2	224.57	269.33	303.9	12	ND	3.1	0.5	ND
Apr-98	NS	NS		120	NS	NS	NS	NS	NS	152	NS	NS	NS	NS	NS	NS	250	NS	NS	NS	NS	NS
Oct-98	NS	NS		255	98	212	NS	NS	109	281	8.5	ND	6	9.6	147	268	231	6.5	NS	7.7	ND	ND
Oct-99	NS	NS		228	92	346.9	NS	NS	90	287	6.6	ND	66	118.9	210.7	233.8	323	8.8	NS	ND	ND	ND
Jan-00	NS	NS		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	108.8	NS	NS	260.2	NS	NS	NS	NS	NS
Mar-00	NS	NS		NS	NS	NS	NS	NS	NS	NS	NS	NS	ND	8.4	NS	NS	300	NS	NS	NS	NS	NS
Jun-00	NS	NS		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND	NS	NS	NS	NS	NS	NS	NS	NS
Oct-00	NS	NS		247	100	277	NS	NS	139	253	7	ND	6	83	453	204	416	7	NS	1.0	ND	ND
Oct-01	NS	NS		283	103.5	167.6	NS	NS	140.2	301.1	6	1.8	9.1	58.7	434.7	247.1	395.4	6.8	NS	ND	ND	ND
Oct/Nov-02	NS	NS		316	85	359	NS	NS	128	334	8	1	7	14	315	293	437	9	NS	13	ND	ND
Oct-03	NS	NS		326	67.7	333.5	NS	NS	134.9	343.8	5.8	ND	24.1	5.1	329.4	266.2	452.4	5.4	NS	ND	ND	ND
Oct-04	NS	NS		342.6	9	197.6	NS	NS	79.9	316.1	7.7	ND	30.9	10.4	368	204.6	434	3.9	NS	ND	ND	ND
Oct-05	NS	NS		310.2	3	100.8	NS	NS	197.5	333.5	3.8	ND	57.6	57.2	346.6	296.8	106.2	3.3	NS	ND	ND	ND
Oct-06	NS	NS		379.2	5.5	22.4	NS	NS	122.1	365.1	4.1	ND	63.8	11.6	230	370.8	427.1	7	NS	ND	ND	ND
Oct-07	NS	NS		432	9.2	9.3	NS	NS	136.9	391.3	3.1	ND	23.1	8.8	257.7	225.7	372	3.4	NS	ND	ND	ND
Oct-08	NS	NS		335	16.6	16.3	NS	NS	107.7	427.1	1	ND	24.4	29.1	218	201.1	414.7	3.4	NS	ND	ND	ND
Oct-09	NS	NS		370.2	32.5	10.1	NS	NS	140.4	443.2	2.3	ND	17.9	16.1	168.7	175.5	378.5	2.9	NS	ND	ND	ND
Oct/Nov-10	NS	NS		431.8	29.8	58	NS	NS	92.7	536.7	2.6	ND	56	46	254.8	190.7	432	2.5	NS	ND	ND	ND
Oct/Nov-11	NS	NS		381.9	32.3	183.6	NS	NS	125.6	417.5	2.5	ND	29.5	14.1	228.7	200	336.6	2.7	NS	0.8	ND	ND
Oct/Nov-12	NS	NS		376.7	35.6	267	NS	NS	108	393.6	1.8	ND	38.5	10.1	249.8	161	370.9	3.8	NS	ND	ND	ND
Oct/Nov-13	NS	NS		347.8	43.9	204.1	NS	NS	123.1	386.7	1.1	ND	40	47.7	205.8	170.4	312.5	2.4	NS	2	ND	ND

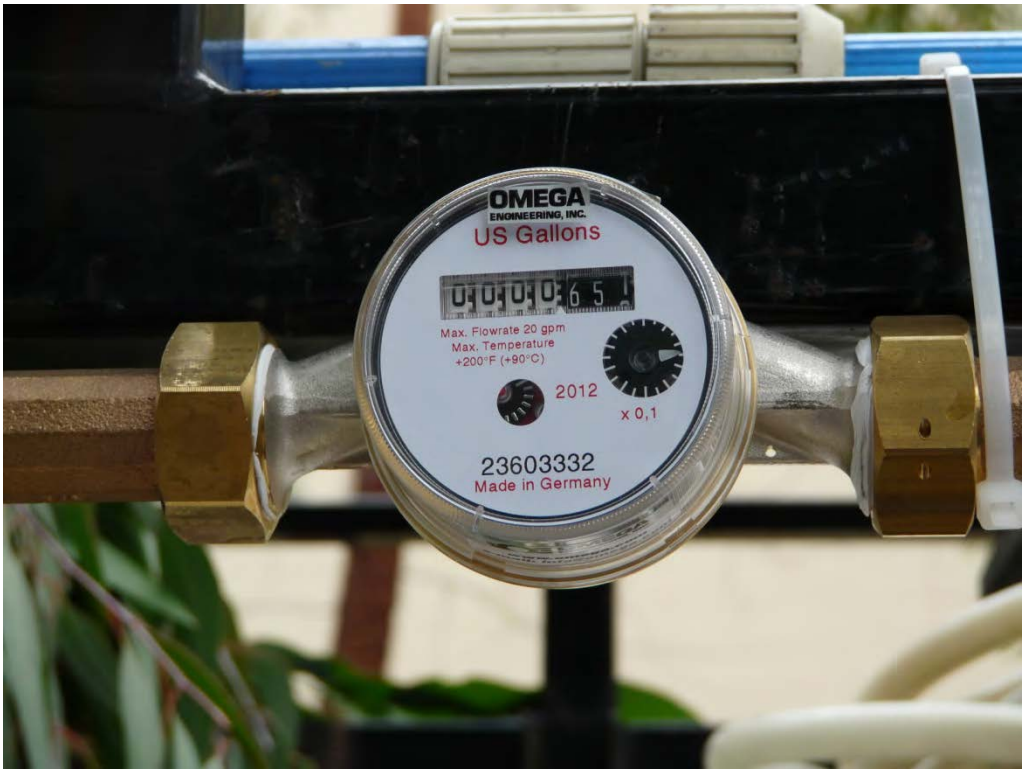
ND	Not Detected
NI	Not Installed
NS	Not Sampled
	Well Destroyed

APPENDIX B

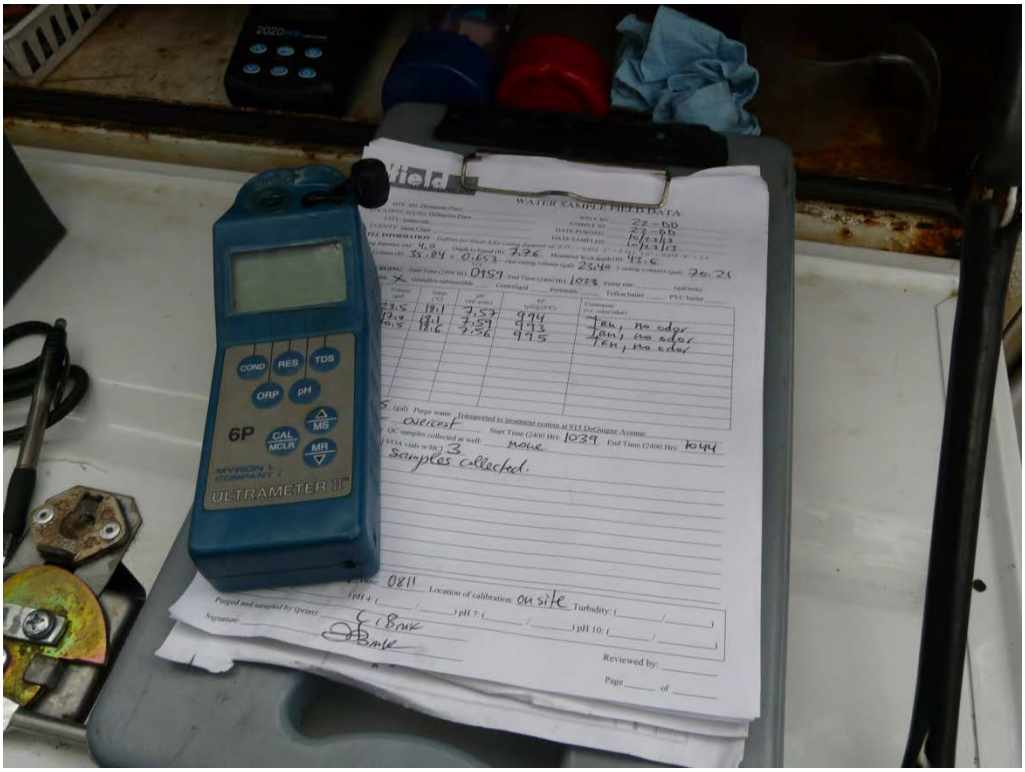
Photographic Log of Sampling Procedures

Recording the liquid level.

Dropping the pump down the well to begin the purge.

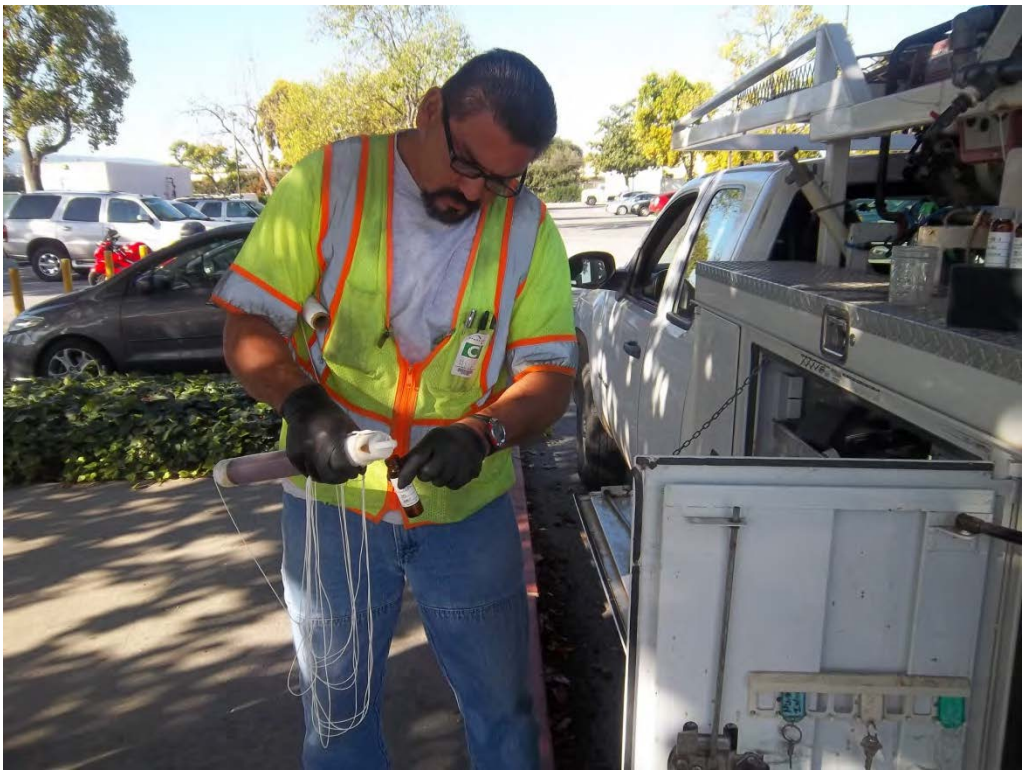


Pumping three casing volumes of purge water from the well through a totalizer into the purge water holding tank.



Recording the stabilization parameters on the field data sheet.

Dropping the Teflon bailer to collect samples.



Filling VOA vials from the Teflon bailer.

Labeled VOA checked for bubbles and being transported to the cooler.

Samples placed in cooler on ice.

Filled out Chain-of-Custody after sample is placed in cooler.

Steam cleaning sampling pump and Teflon bailer after use.

Flushing pump with hot water before moving onto next location.

APPENDIX C

Quality Assurance/ Quality Control Data

Data Usability Summary Report (DUSR)
915 DeGuigne Drive
Analytical Laboratory: Curtis & Tompkins, Ltd. - Berkeley, CA
Sample Delivery Group # 250462

Analytical results for the project samples were reviewed to evaluate the data usability. Data was assessed in accordance with guidance from the following Federal and/or State guidance documents:

- USEPA National Functional Guidelines for Organic Data Review (EPA 540-R-08-01) and/or
  USEPA National Functional Guidelines for Low Concentration Organic Data Review (EPA 540-R-00-006)

and method protocol criteria where applicable as prescribed by "Test Methods for Evaluating Solid Waste", SW846, Update III, 1996, or Standard Methods for the Examination of Water and Wastewater, Eds 18-20.

This DUSR pertains to the following samples:

Sample ID	Sample ID
EW-1	51-D
EW-2	45-DD
EW-4	3-S
EW-5	1-S
EW-6	11-S
EW-7	EB-1
EW-8	49-DD
EW-9	49-D
EW-10	43-DD
BS-6	1-D
SUMP 1,2,3,4	18-S
TB-1	18-DD
50-DDD	EB-2

Project Samples were analyzed according to the following analytical methods:

	Parameter	Analytical Method	Holding Time Criteria
1.	VOCs	EPA 8260B/624	14 days

The following items/criteria applicable to the analysis of project samples and associated QA/QC procedures were reviewed.

- Holding Times
- Blank Sample Analysis
- System Monitoring Compound Recoveries
- Laboratory Control Samples, Matrix Spike/Matrix Spike Duplicate Recoveries
- Field Duplicate Sample Analysis
- Sample Data Reporting Format
- Data Qualifiers
- Summary

Preservation and Holding Times

Maximum allowable holding times, measured from the time of sample collection to the time of sample preparation or analysis, were met for each project sample analyzed as part of this sample delivery group. No qualification of the data is recommended.

Blank Sample Analysis

In accordance with cited USEPA guidelines, positive sample results should be reported unless the concentration of the compound in the project sample is less than or equal to 10 times (10X) the amount in any blank for metals and the common organic laboratory contaminants (methylene chloride, acetone, 2-butanone, cyclohexane, and phthalate esters), or 5 times (5X) the amount for other target compounds. Target analytes were not detected in associated blank samples (trip, equipment, method) prepared and analyzed concurrently with the project samples. No qualification of the data is recommended.

System Monitoring Compound Recoveries

System monitoring/surrogate compounds are added to each sample prior to analysis of organic parameters to confirm the efficiency of the sample preparation procedure. The calculated recovery for each surrogate compound was evaluated to confirm the accuracy of the reported results. The calculated recovery of these compounds fell within the laboratory specific quality control criteria, with the following exception(s):

Surrogate Percent Recovery Criteria				
Surrogate		**Aqueous Matrix (%)**	**Solid Matrix (%)**	**Vapor Matrix (%)**
Dibromofluoromethane	S01	low high	low high	low high
1,2-Dichloroethane-d4	S02	72 - 140	low high	low high
Toluene-d8	S03	low high	low high	low high
4-Bromofluorobenzene	S04	low high	low high	low high

Project Sample ID	Matrix	S01 %R	S02 %R	S03 %R	S04 %R	Positive Results	Non Detect (ND)
TB-1	AQ		143			J	None
50-DDD	AQ		143			J	None
51-D	AQ		145			J	None
3-S	AQ		145			J	None
49-D	AQ		143			J	None

Affected Analytes
All VOC target analytes in identified project sample(s).

Action: If the surrogate percent recovery is greater than the upper acceptance limit, associated target analyte positive results are qualified “J” and non-detects should not be qualified. If the surrogate percent recovery is less than the lower acceptance limit associated target analyte positive results are qualified “J” and non-detects are qualified “UJ”. If the surrogate percent recovery is less than 10% associated target analyte positive results are qualified “J” and non-detects are qualified “R”.

Laboratory Control Samples, Matrix Spike/Matrix Spike Duplicate Recoveries

Analytical precision and accuracy was evaluated based on the laboratory control and matrix spike sample analyses performed concurrently with the project samples. For matrix spike samples, after the addition of a known amount of each target analyte to the sample matrix, the sample was analyzed to confirm the ability to identify these compounds within the sample matrix. For LCS analyses, after the addition of a known amount of each target analyte into laboratory reagent water, the sample was analyzed to confirm the ability of the analytical system to accurately quantify the compounds. The reported recovery of MS/MSD and LCS analyses fell within the laboratory QA acceptance criteria, with the following exception(s):

LCS ID / Project Sample MS	Type	Target Analyte(s)	%R Criteria	%R	%RPD	Affected Sample(s)
49-DD	MS	1,2,4-Trichlorobenzene	67 - 123	135	0	EW-5
MS/MSD (204842)	MS	1,2,3-Trichlorobenzene	69 - 127	141	2	EW-6
						EW-7 (1,2,4-TCB only - J)
						EW-10
49-DD	MSD	1,2,4-Trichlorobenzene	67 - 123	135	0	EW-5
MS/MSD (204842)	MSD	1,2,3-Trichlorobenzene	69 - 127	138	2	EW-6
						EW-7 (1,2,4-TCB only - J)
						EW-10

Action:

If the LCS %R is greater than the upper acceptance limit, associated target analyte positive results are qualified "J" and non-detects should not be qualified. If the LCS %R is less than the lower acceptance limit associated target analyte positive results are qualified "J" and non-detects are qualified "R". If the MS/MSD is from a project sample and the %R greater than the upper acceptance limit, associated target analyte positive results are qualified "J" and non-detects should not be qualified. If the MS/MSD %R is >10%, but less than the lower acceptance limit, associated analyte positive results are qualified "J" and non-detects are qualified "UJ". If the MS/MSD %R is less than 10% associated target analyte positive results are qualified "J" and non-detects are qualified "R". MS/MSD qualifiers are only applied to affected samples of the same matrix. If the MS/MSD is a LAB sample do not qualify project samples.

Field Duplicate Sample Analysis

The overall variability attributable to the sampling procedure, sample matrix, and laboratory procedures, was evaluated by assessing the relative percent difference (RPD) data from field duplicate samples. All calculated RPD values were within matrix specific data quality objectives, with the exception of results qualified "J" as shown in the table(s) below:

Target Analyte(s)	Original Sample ID.	FD Sample ID.	%RPD	Flag Original and FD sample results with:
	EW-6	EW-10		
trans-1,2-Dichloroethene	1.5	1.8	18%	
cis-1,2-Dichloroethene	63	86	31%	
1,1,1-Trichloroethane	0.5	0.6	18%	
Trichloroethene	57	67	16%	
Tetrachloroethene	1	0.9	11%	
1,2,4-Trichlorobenzene	82	88	7%	
1,2,3-Trichlorobenzene	33	40	19%	

Target Analyte(s)	Original Sample ID.	FD Sample ID.	%RPD	Flag Original and FD sample results with:
	43-DD	1-D		
Trichloroethene	2.4	2.2	9%	

Action:

If the sample matrix is solid and the %RPD is greater than 50%, the original sample results are qualified "J". If the sample matrix is water or air and the %RPD is greater than 35%, the original sample results are qualified "J".

Sample Data Reporting Format

The sample data are presented using USEPA Contract Laboratory Protocol (CLP) format or equivalent. The data package has been reviewed for completeness and found to contain each required sample result and associated QA/QC report form. The reporting format is complete and compliant with the objectives of the project. No qualification of the data is recommended.

Data Qualifiers

Samples that contain results between the MDL and RL were flagged as estimated, "J", by the laboratory. The data user should be aware that there is a possibility of false positive or mis-identification at the quantitation levels. The laboratory also qualified results when target analytes were detected in the associated method/preparation blank sample. Based on a spot check of the data qualifiers used, these flags appeared to be applied to the reported results in accordance with EPA guidance.

Summary

The results presented in each report were found to be compliant with the data quality objectives for the project and usable. Based on our review, the usability of the data is 100%, with the few exceptions noted above.

Data Usability Summary Report (DUSR)
915 DeGuigne Drive Annual
Analytical Laboratory: Curtis & Tompkins, Ltd. - Berkeley, CA
Sample Delivery Group # 250674

Analytical results for the project samples were reviewed to evaluate the data usability. Data was assessed in accordance with guidance from the following Federal and/or State guidance documents:

- USEPA National Functional Guidelines for Organic Data Review (EPA 540-R-08-01) and/or
  USEPA National Functional Guidelines for Low Concentration Organic Data Review (EPA 540-R-00-006)

and method protocol criteria where applicable as prescribed by "Test Methods for Evaluating Solid Waste", SW846, Update III, 1996, or Standard Methods for the Examination of Water and Wastewater, Eds 18-20.

This DUSR pertains to the following samples:

Sample ID	Sample ID
TB-2	20-D
2-S	EB-4
8-S	42-DD
49-S	41-D
19-D	10-D
11-DD	2-D
40-D	41-S
EB-3	EB-5
31-S	EW-3
19-S	
32-DD	
40-S	
20-DD	

Project Samples were analyzed according to the following analytical methods

	Parameter	Analytical Method	Holding Time Criteria
1.	VOCs	EPA 8260B/624	14 days

The following items/criteria applicable to the analysis of project samples and associated QA/QC procedures were reviewed

- Holding Times
- Blank Sample Analysis
- System Monitoring Compound Recoveries
- Laboratory Control Samples, Matrix Spike/Matrix Spike Duplicate Recoveries
- Field Duplicate Sample Analysis
- Sample Data Reporting Format
- Data Qualifiers
- Summary

Preservation and Holding Times

Maximum allowable holding times, measured from the time of sample collection to the time of sample preparation or analysis, were met for each project sample analyzed as part of this sample delivery group. No qualification of the data is recommended.

Blank Sample Analysis

In accordance with cited USEPA guidelines, positive sample results should be reported unless the concentration of the compound in the project sample is less than or equal to 10 times (10X) the amount in any blank for metals and the common organic laboratory contaminants (methylene chloride, acetone, 2-butanone, cyclohexane, and phthalate esters), or 5 times (5X) the amount for other target compounds. Target analytes were not detected in associated blank samples (trip, equipment, method) prepared and analyzed concurrently with the project samples. No qualification of the data is recommended.

System Monitoring Compound Recoveries

System monitoring/surrogate compounds are added to each sample prior to analysis of organic parameters to confirm the efficiency of the sample preparation procedure. The calculated recovery for each surrogate compound was evaluated to confirm the accuracy of the reported results. The calculated recovery of these compounds fell within the laboratory specific quality control criteria. No qualification of the data is recommended.

Laboratory Control Samples, Matrix Spike/Matrix Spike Duplicate Recoveries

Analytical precision and accuracy was evaluated based on the laboratory control and matrix spike sample analyses performed concurrently with the project samples. For matrix spike samples, after the addition of a known amount of each target analyte to the sample matrix, the sample was analyzed to confirm the ability to identify these compounds within the sample matrix. For LCS analyses, after the addition of a known amount of each target analyte into laboratory reagent water, the sample was analyzed to confirm the ability of the analytical system to accurately quantif the compounds. The reported recovery of MS/MSD and LCS analyses fell within the laboratory QA acceptance criteria, with the following exception(s):

LCS ID / Project Sample MS	Type	Target Analyte(s)	%R Criteria	%R	%RPD	Affected Sample(s)
Sample ID	BS	1,2,4-Trichlorobenzene	62 - 138	139	5	None, all samples ND
BS/BSD (205163)	BS	1,2,3-Trichlorobenzene	62 - 141	144	1	
Sample ID	BSD	1,2,4-Trichlorobenzene	62 - 138	132	5	None, all samples ND
BS/BSD (205163)	BSD	1,2,3-Trichlorobenzene	62 - 141	142	1	
40-D	MS	Trichloroethene	72 - 123	45	1	Qualify positive results
MS/MSD (205165)						"J" and non-detects
						"UJ".
						2-S
						8-S
						40-D
						31-S
						19-S
40-D	MSD	Trichloroethene	72 - 123	42	1	Qualify positive results
MS/MSD (205165)						"J" and non-detects
						"UJ".
						2-S
						8-S
						40-D
						31-S
						19-S

Action:

If the LCS %R is greater than the upper acceptance limit, associated target analyte positive results are qualified "J" and non-detects should not be qualified. If the LCS %R is less than the lower acceptance limit associated target analyte positive results are qualified "J" and non-detects are qualified "R". If the MS/MSD is from a project sample and the %R greater than the upper acceptance limit, associated target analyte positive results are qualified "J" and non-detects should not be qualified. If the MS/MSD %R is >10%, but less than the lower acceptance limit, associated analyte positive results are qualified "J" and non-detects are qualified "UJ". If the MS/MSD %R is less than 10% associated target analyte positive results are qualified "J" and non-detects are qualified "R". MS/MSD qualifiers are only applied to affected samples of the same matrix. If the MS/MSD is a LAB sample do not qualify project samples.

Field Duplicate Sample Analysis

The overall variability attributable to the sampling procedure, sample matrix, and laboratory procedures, was evaluated by assessing the relative percent difference (RPD) data from field duplicate samples. All calculated RPD values were within matrix specific data quality objectives, with the exception of results qualified "J" as shown in the table(s) below:

	Original Sample ID.	FD Sample ID.		Flag Original and FD
Target Analyte(s)	10-D	2-D	%RPD	sample results with:
Vinyl chloride	2.8	2.8	0%	
cis-1,2-Dichloroethene	310	300	3%	
Trichloroethene	35	33	6%	

Action:

If the sample matrix is solid and the %RPD is greater than 50%, the original sample results are qualified "J". If the sample matrix is water or air and the %RPD is greater than 35%, the original sample results are qualified "J".

Sample Data Reporting Format

The sample data are presented using USEPA Contract Laboratory Protocol (CLP) format or equivalent. The data package has been reviewed fo completeness and found to contain each required sample result and associated QA/QC report form. The reporting format is complete and compliant with the objectives of the project. No qualification of the data is recommended.

Data Qualifiers

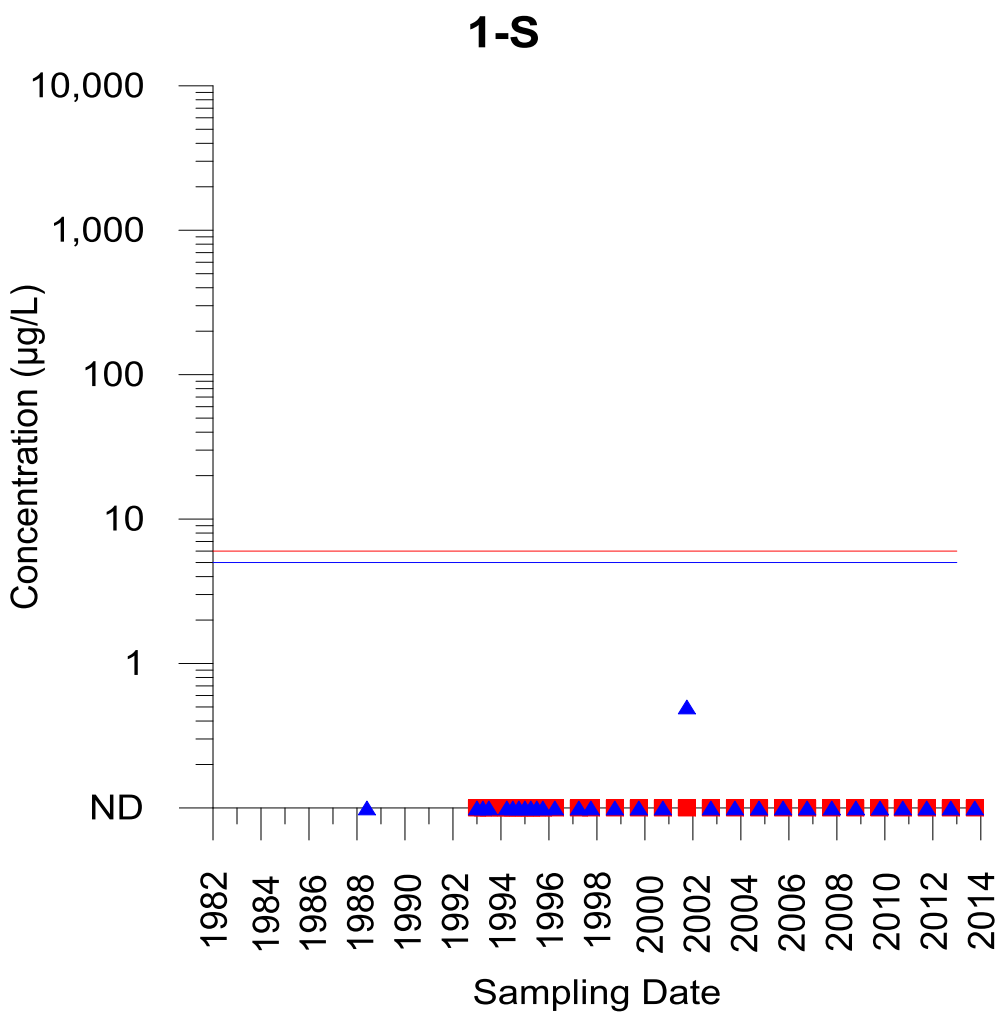
Samples that contain results between the MDL and RL were flagged as estimated, "J", by the laboratory. The data user should be aware that there is a possibility of false positive or mis-identification at the quantitation levels. The laboratory also qualified results when target analytes were detected in the associated method/preparation blank sample. Based on a spot check of the data qualifiers used, these flags appeared to be applied to the reported results in accordance with EPA guidance.

Summary

The results presented in each report were found to be compliant with the data quality objectives for the project and usable. Based on our review, the usability of the data is 100%, with the few exceptions noted above.

APPENDIX D

Concentration Trends in Site Monitoring Wells



EXPLANATION

TCE
cDCE
Cleanup Goal for TCE
Cleanup Goal for cDCE

ABBREVIATIONS

TCE = trichloroethene
cDCE = cis-1,2-dichloroethene

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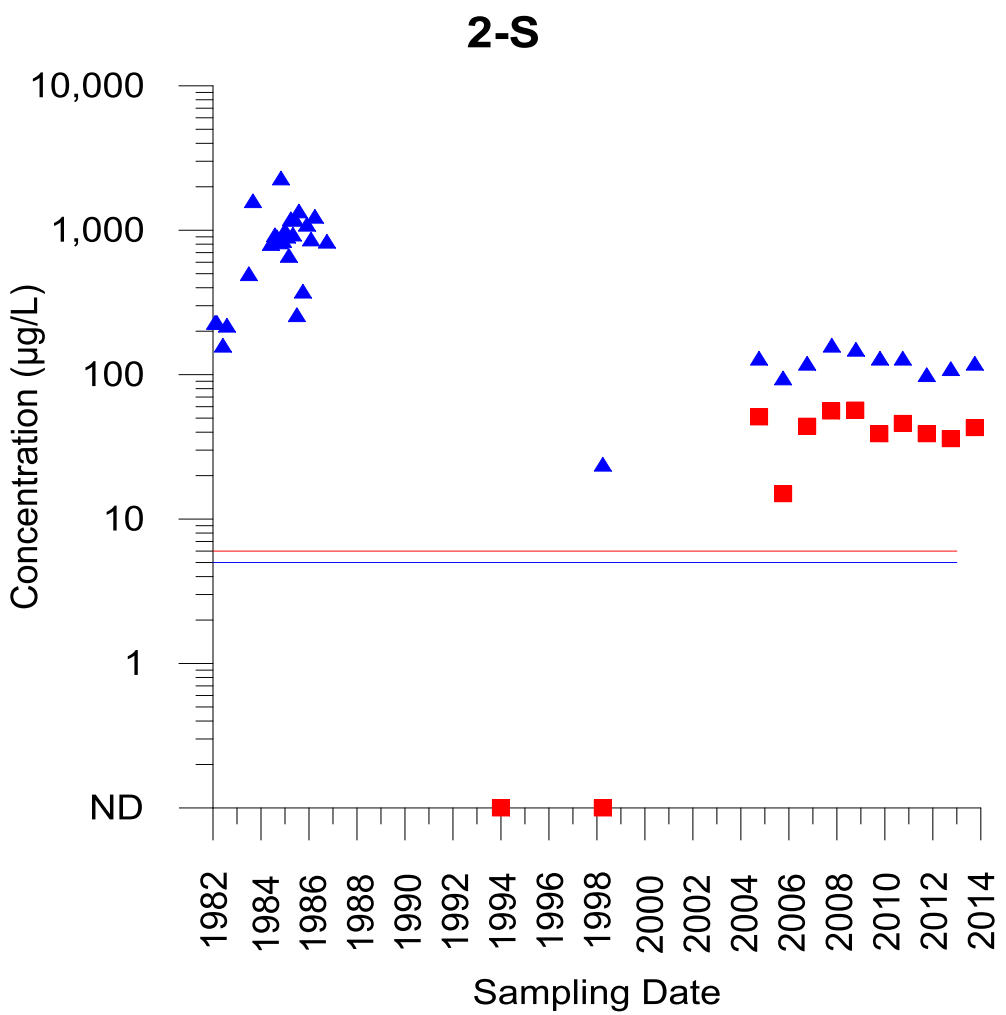
SUNNYVALE, CALIFORNIA

CONCENTRATION TRENDS FOR WELL 1-S

JANUARY 2014

FIGURE D-1



EXPLANATION

TCE
cDCE
Cleanup Goal for TCE
Cleanup Goal for cDCE

ABBREVIATIONS

TCE = trichloroethene
cDCE = cis-1,2-dichloroethene

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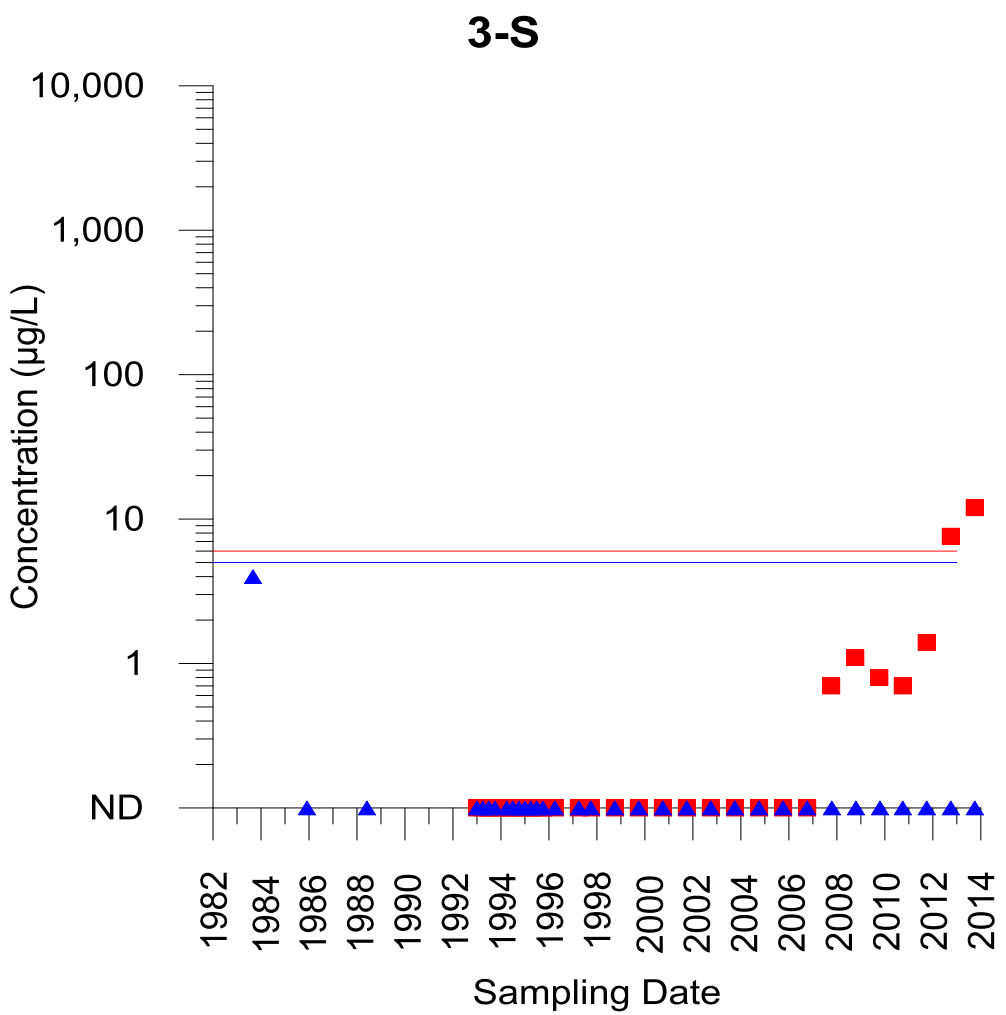
CONCENTRATION TRENDS FOR WELL 2-S

JANUARY 2014

FIGURE D-2



EXPLANATION

TCE
cDCE
Cleanup Goal for TCE
Cleanup Goal for cDCE

ABBREVIATIONS

TCE = trichloroethene
cDCE = cis-1,2-dichloroethene

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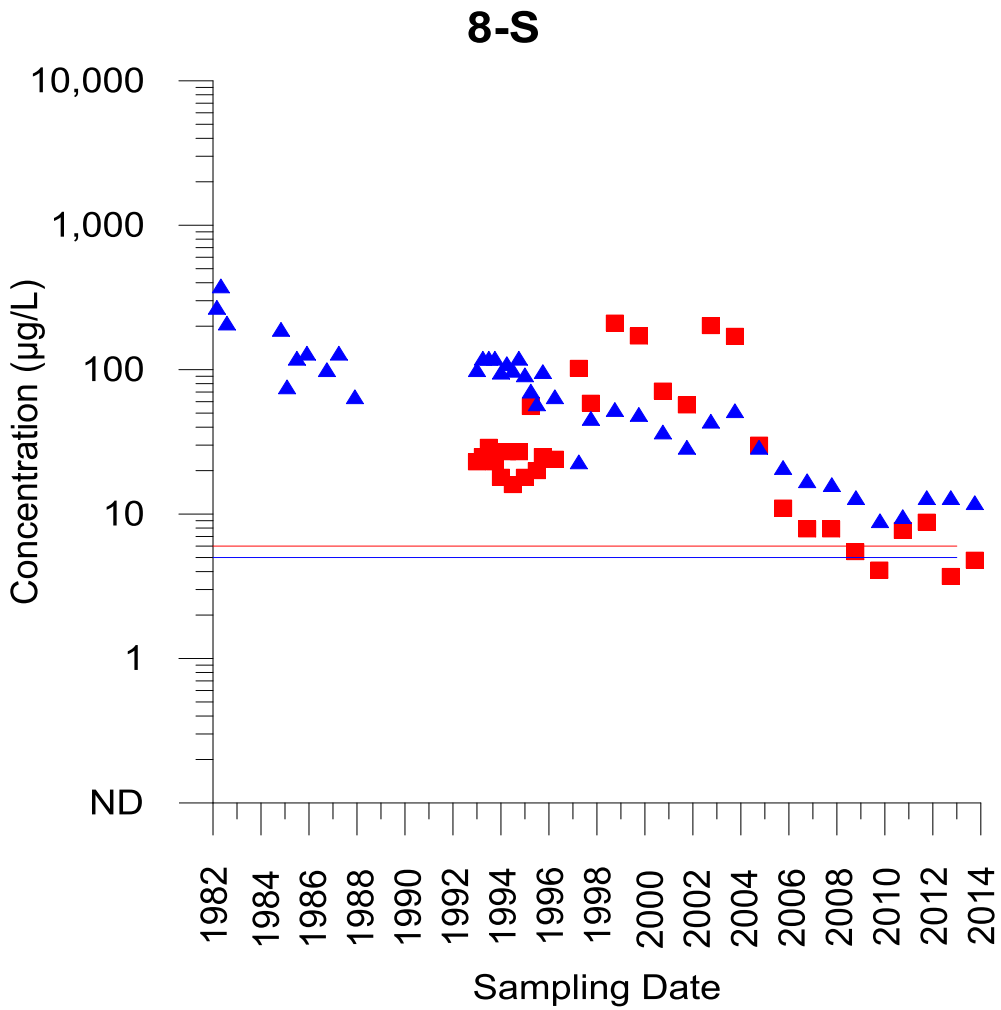
CONCENTRATION TRENDS FOR WELL 3-S

JANUARY 2014

FIGURE D-3



EXPLANATION

TCE
cDCE
Cleanup Goal for TCE
Cleanup Goal for cDCE

ABBREVIATIONS

TCE = trichloroethene
cDCE = cis-1,2-dichloroethene

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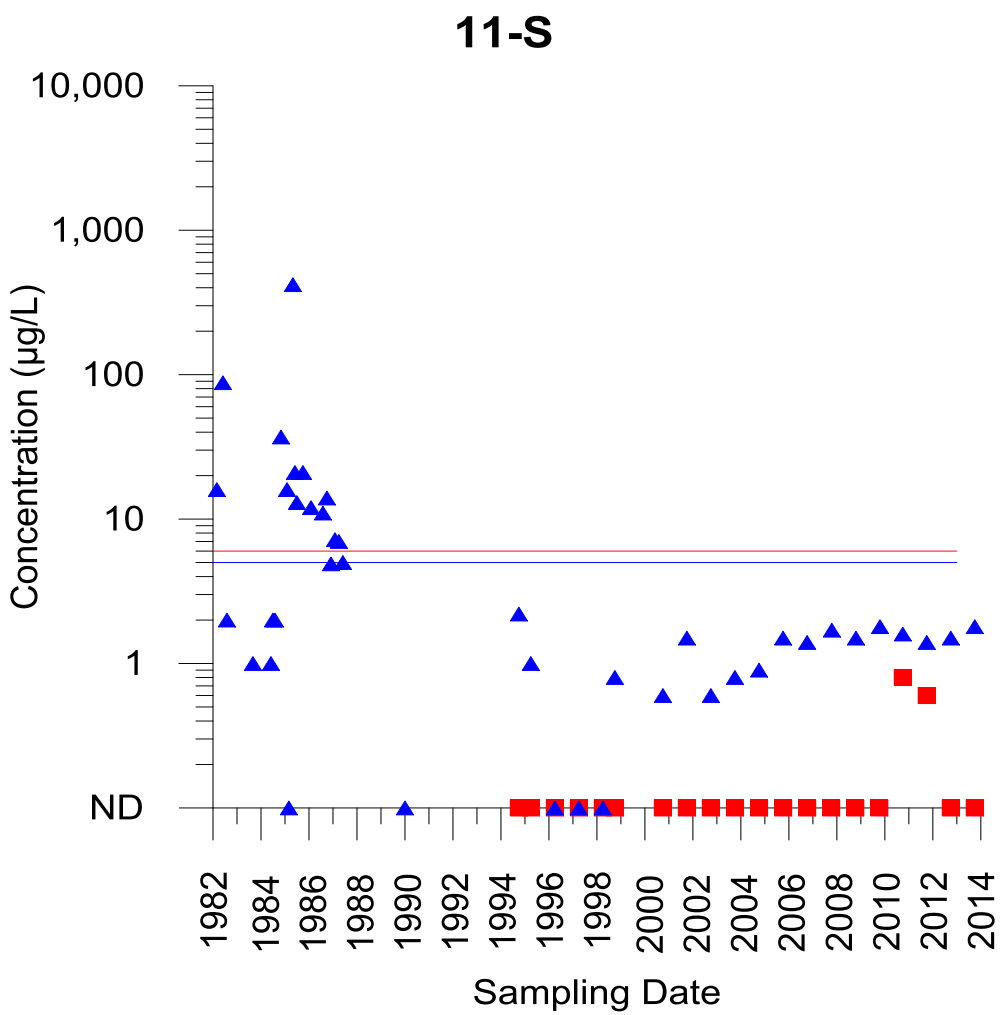
CONCENTRATION TRENDS FOR WELL 8-S

JANUARY 2014

FIGURE D-4



EXPLANATION

TCE
cDCE
Cleanup Goal for TCE
Cleanup Goal for cDCE

ABBREVIATIONS

TCE = trichloroethene
cDCE = cis-1,2-dichloroethene

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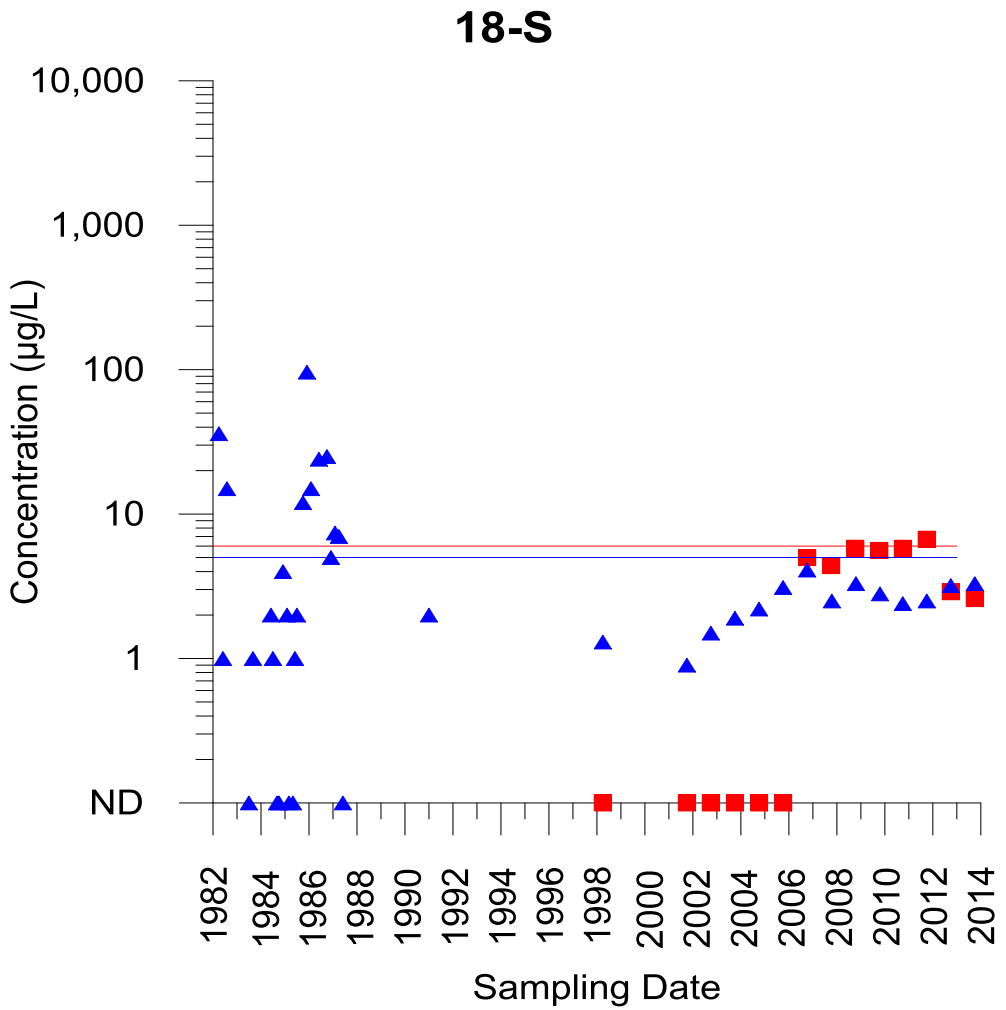
CONCENTRATION TRENDS FOR WELL 11-S

JANUARY 2014

FIGURE D-5



EXPLANATION

TCE
cDCE
Cleanup Goal for TCE
Cleanup Goal for cDCE

ABBREVIATIONS

TCE = trichloroethene
cDCE = cis-1,2-dichloroethene

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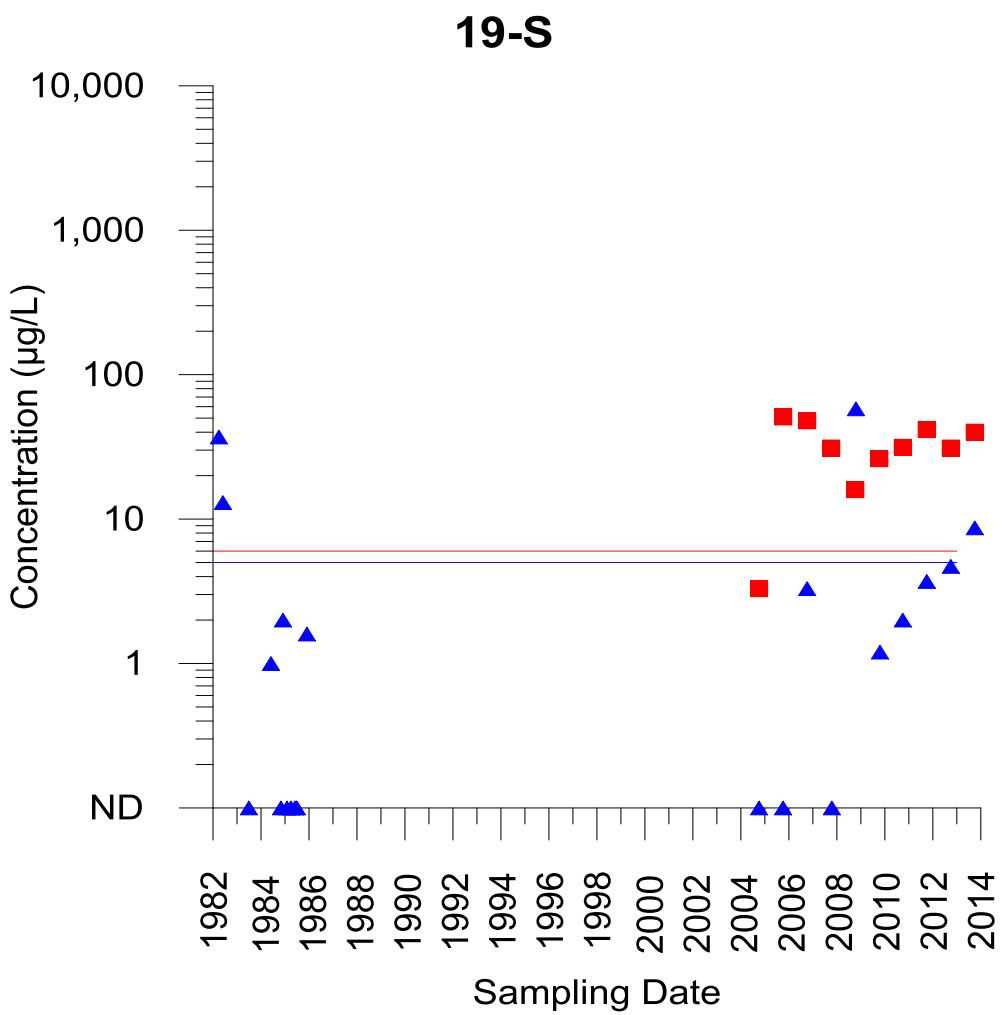
CONCENTRATION TRENDS FOR WELL 18-S

JANUARY 2014

FIGURE D-6



EXPLANATION

TCE
cDCE
Cleanup Goal for TCE
Cleanup Goal for cDCE

ABBREVIATIONS

TCE = trichloroethene
cDCE = cis-1,2-dichloroethene

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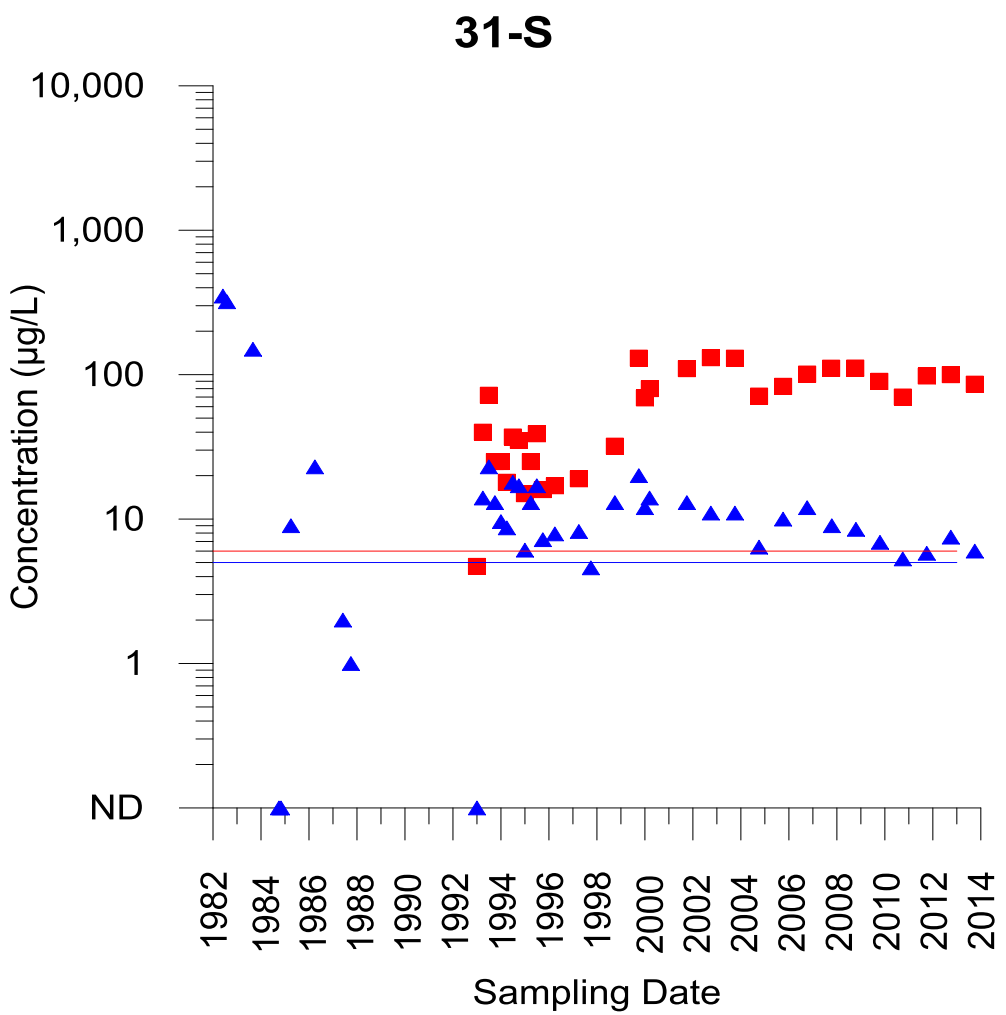
CONCENTRATION TRENDS FOR WELL 19-S

JANUARY 2014

FIGURE D-7



EXPLANATION

TCE
cDCE
Cleanup Goal for TCE
Cleanup Goal for cDCE

ABBREVIATIONS

TCE = trichloroethene
cDCE = cis-1,2-dichloroethene

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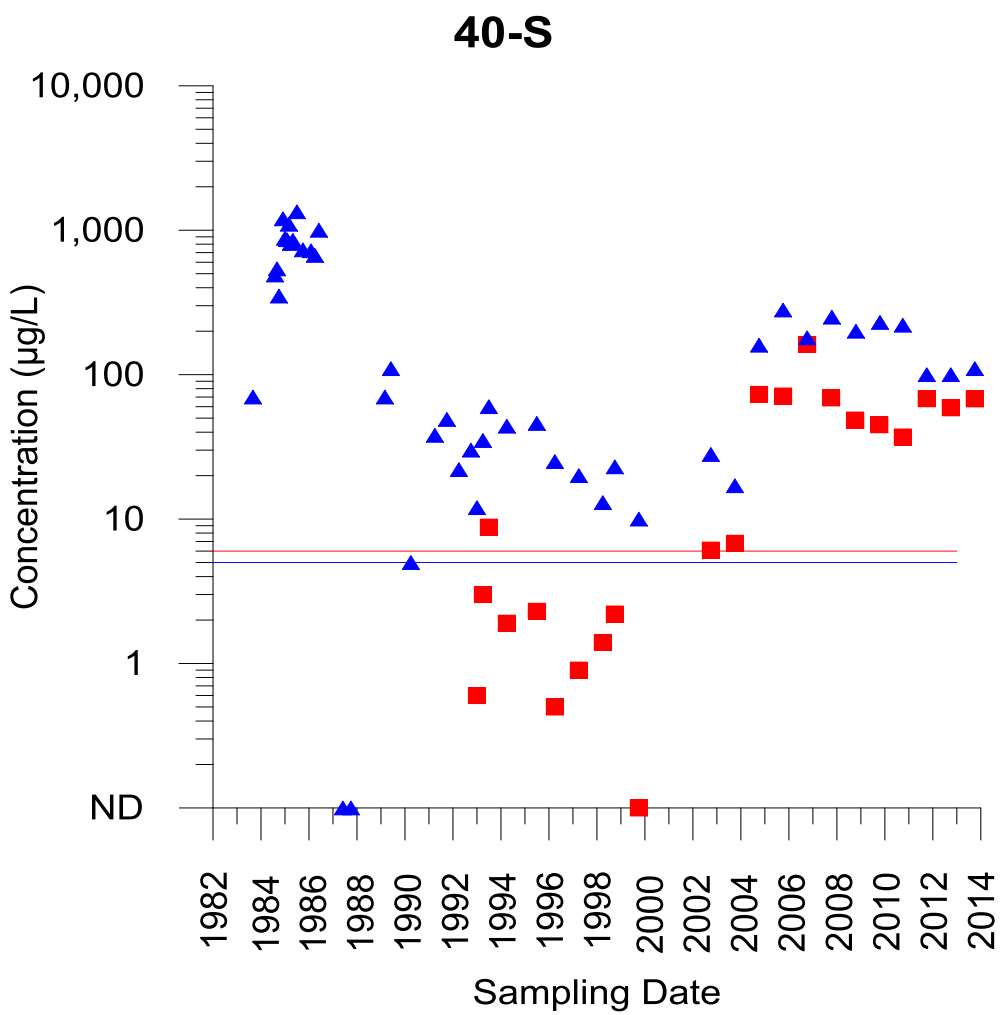
CONCENTRATION TRENDS FOR WELL 31-S

JANUARY 2014

FIGURE D-8



EXPLANATION

TCE
cDCE
Cleanup Goal for TCE
Cleanup Goal for cDCE

ABBREVIATIONS

TCE = trichloroethene
cDCE = cis-1,2-dichloroethene

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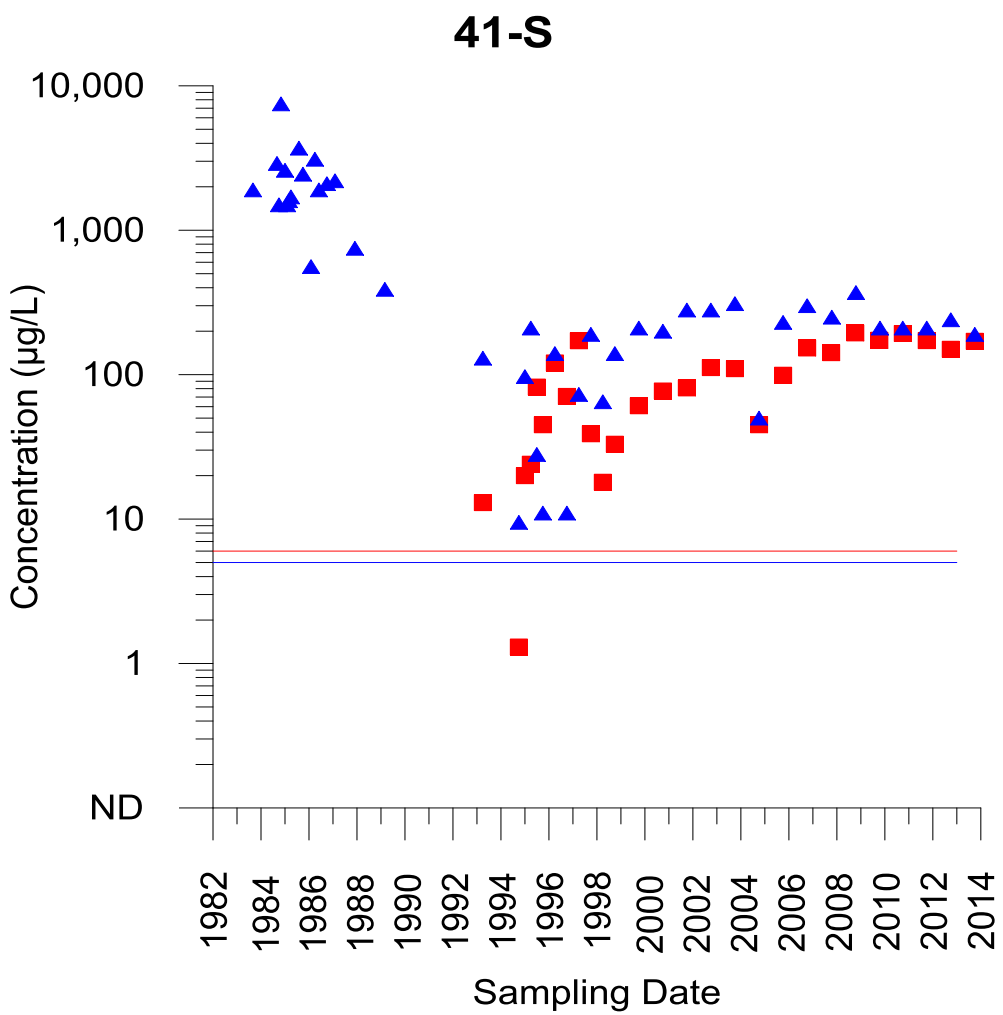
CONCENTRATION TRENDS FOR WELL 40-S

JANUARY 2014

FIGURE D-9



EXPLANATION

TCE
cDCE
Cleanup Goal for TCE
Cleanup Goal for cDCE

ABBREVIATIONS

TCE = trichloroethene
cDCE = cis-1,2-dichloroethene

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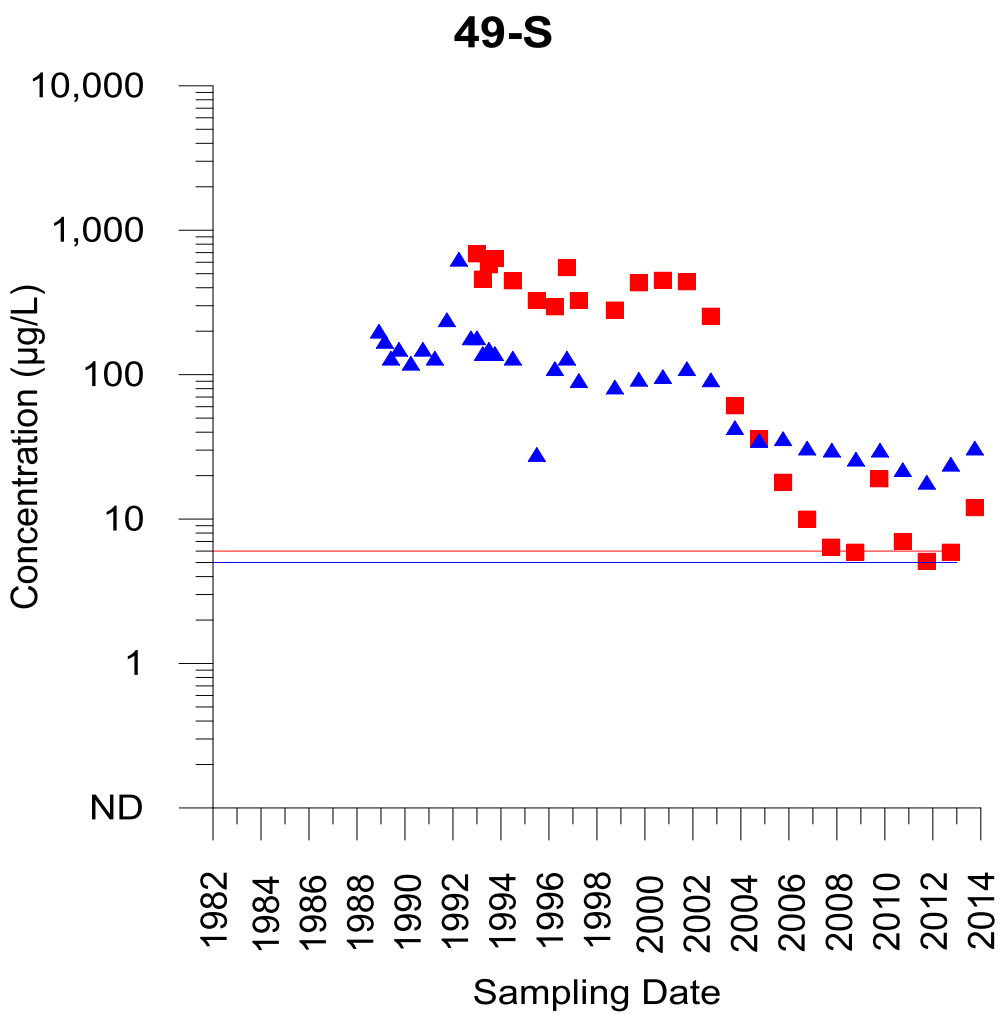
CONCENTRATION TRENDS FOR WELL 41-S

JANUARY 2014

FIGURE D-10



EXPLANATION

TCE
cDCE
Cleanup Goal for TCE
Cleanup Goal for cDCE

ABBREVIATIONS

TCE = trichloroethene
cDCE = cis-1,2-dichloroethene

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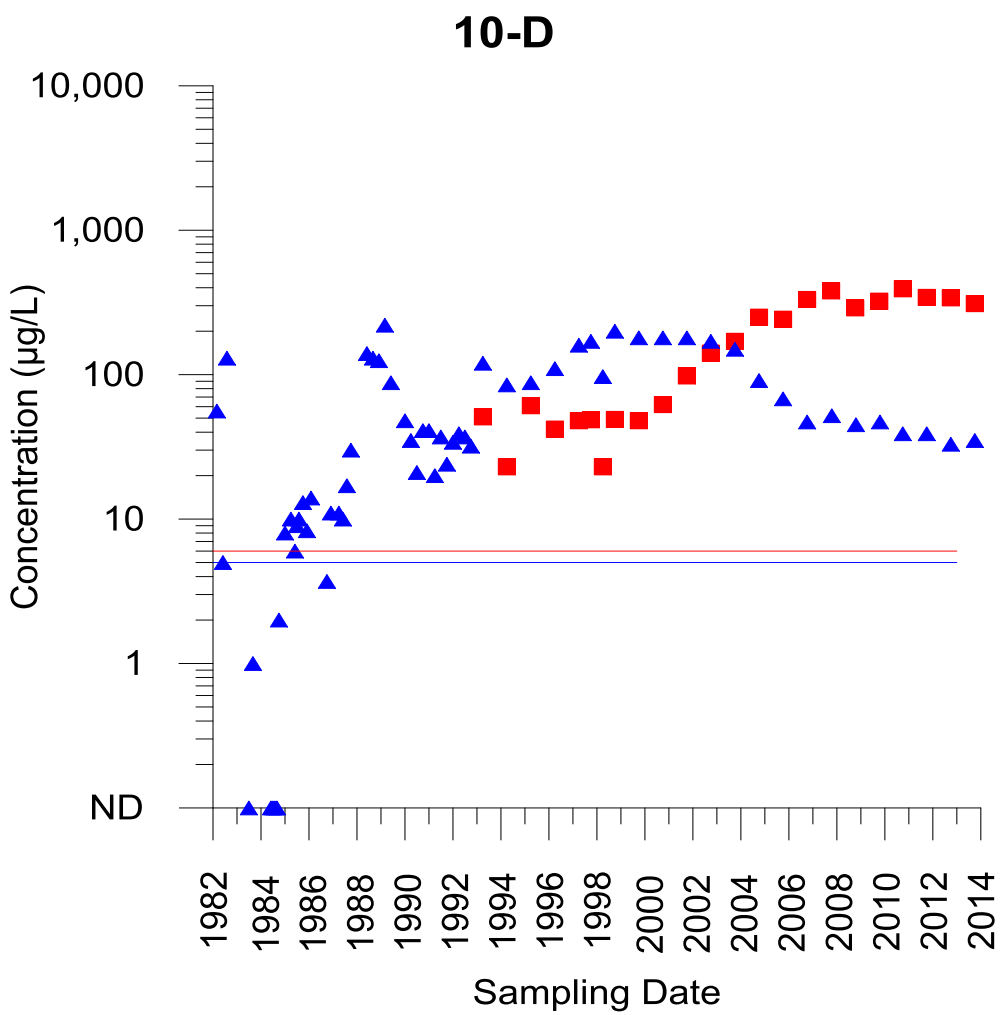
CONCENTRATION TRENDS FOR WELL 49-S

JANUARY 2014

FIGURE D-11



EXPLANATION

TCE
cDCE
Cleanup Goal for TCE
Cleanup Goal for cDCE

ABBREVIATIONS

TCE = trichloroethene
cDCE = cis-1,2-dichloroethene

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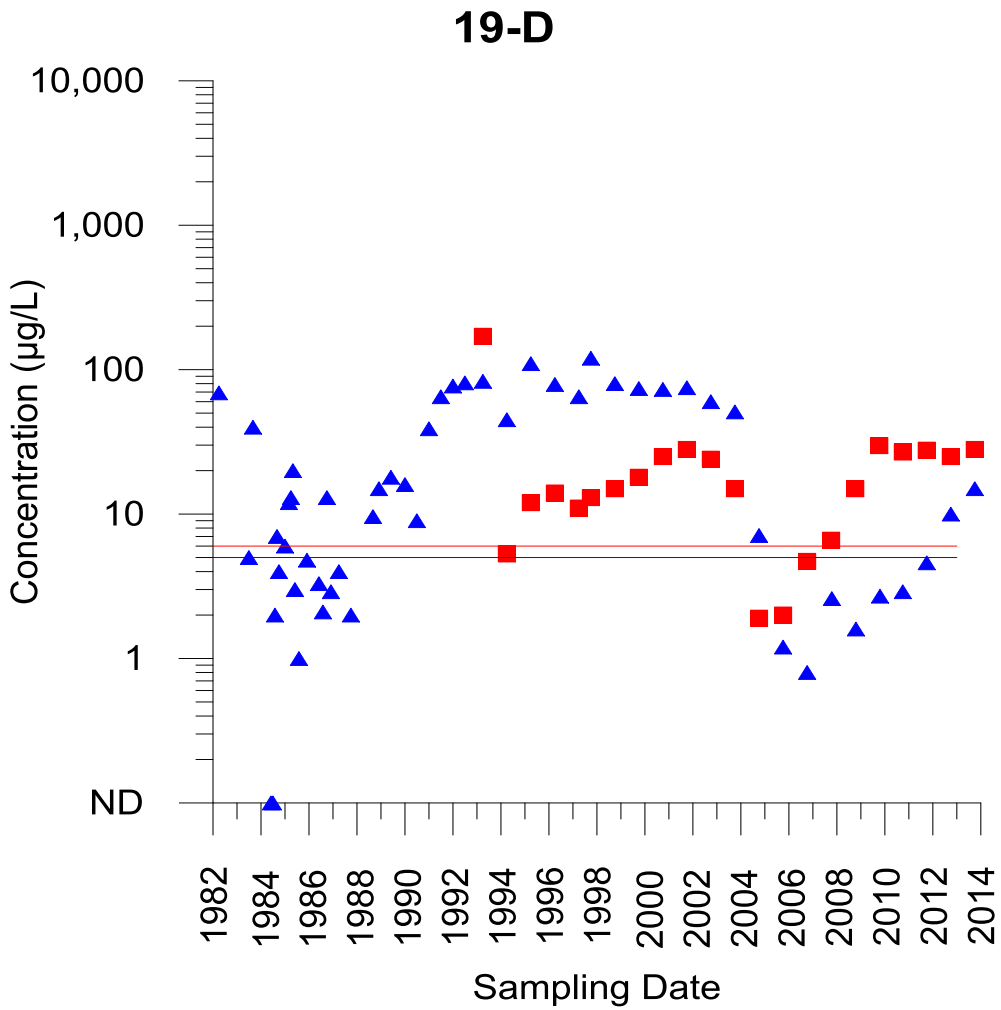
CONCENTRATION TRENDS FOR WELL 10-D

JANUARY 2014

FIGURE D-12



EXPLANATION

TCE
cDCE
Cleanup Goal for TCE
Cleanup Goal for cDCE

ABBREVIATIONS

TCE = trichloroethene
cDCE = cis-1,2-dichloroethene

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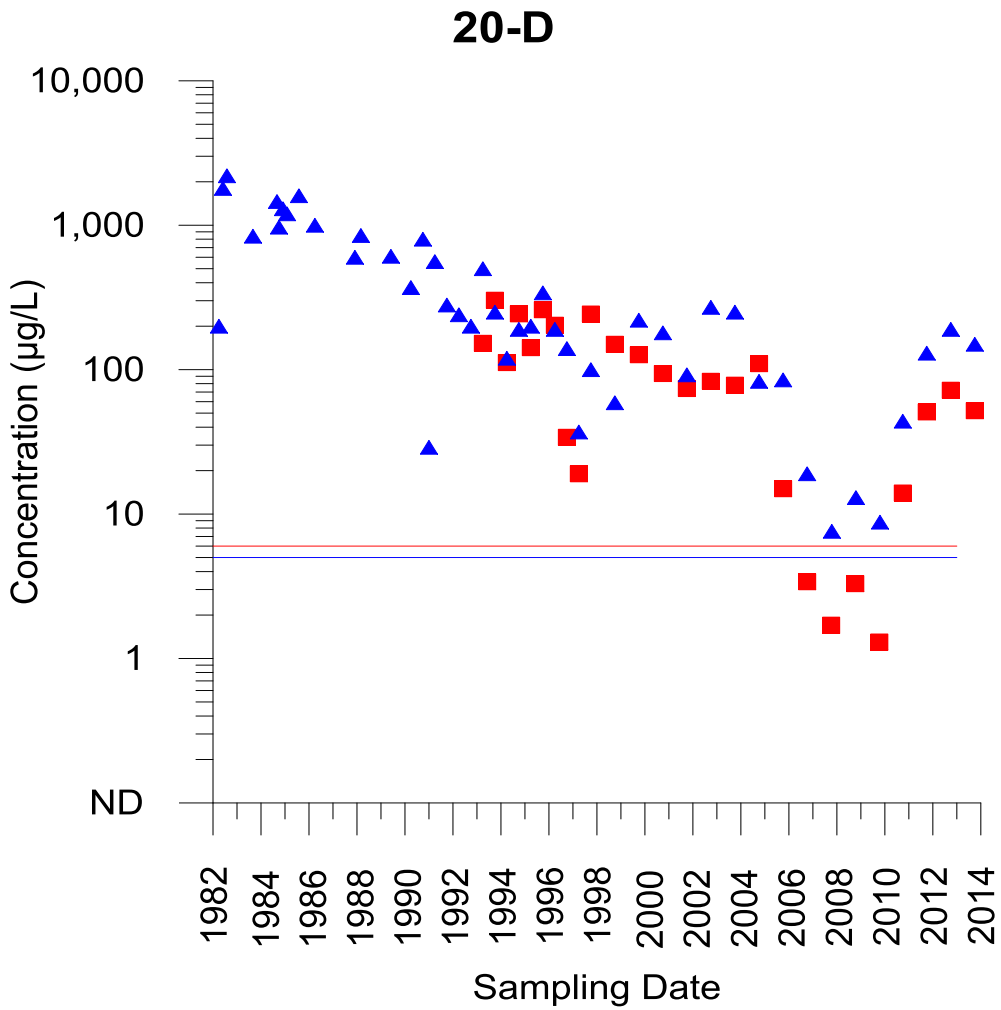
CONCENTRATION TRENDS FOR WELL 19-D

JANUARY 2014

FIGURE D-13



EXPLANATION

TCE
cDCE
Cleanup Goal for TCE
Cleanup Goal for cDCE

ABBREVIATIONS

TCE = trichloroethene
cDCE = cis-1,2-dichloroethene

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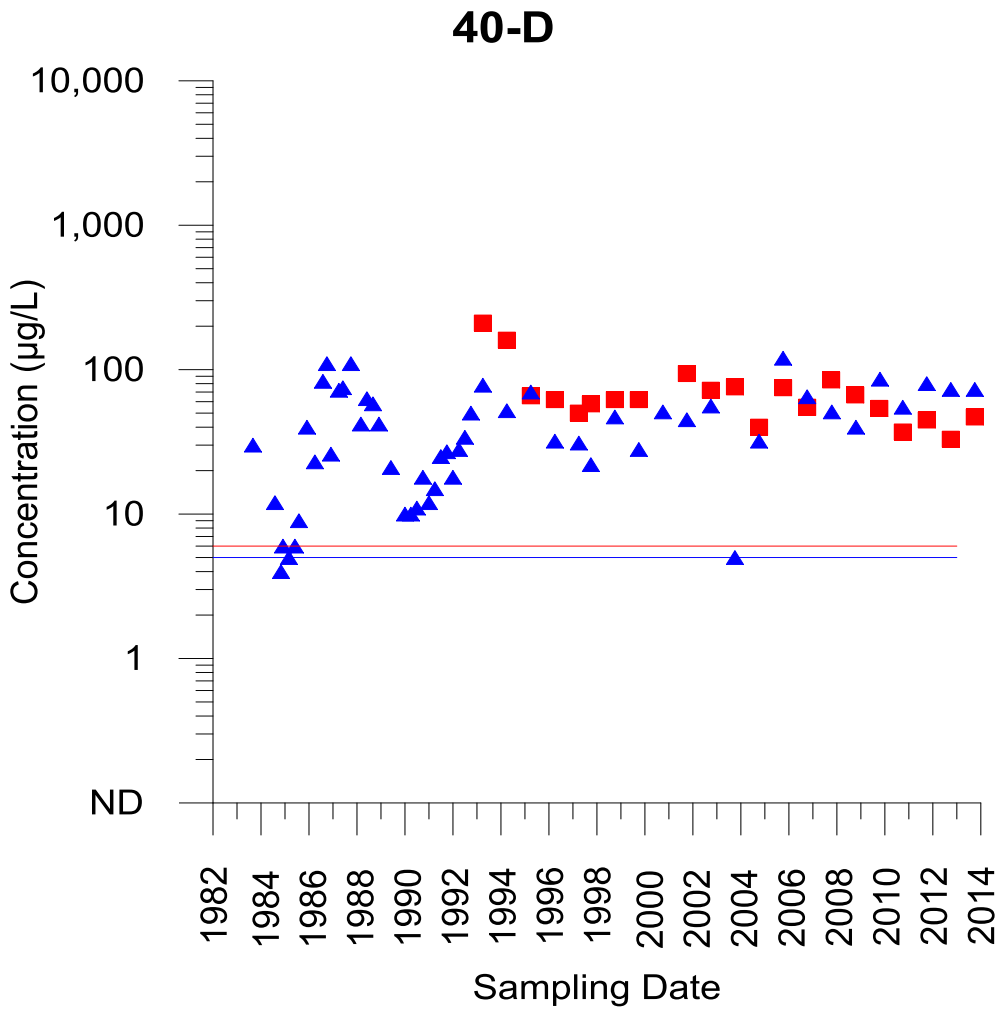
CONCENTRATION TRENDS FOR WELL 20-D

JANUARY 2014

FIGURE D-14



EXPLANATION

TCE
cDCE
Cleanup Goal for TCE
Cleanup Goal for cDCE

ABBREVIATIONS

TCE = trichloroethene
cDCE = cis-1,2-dichloroethene

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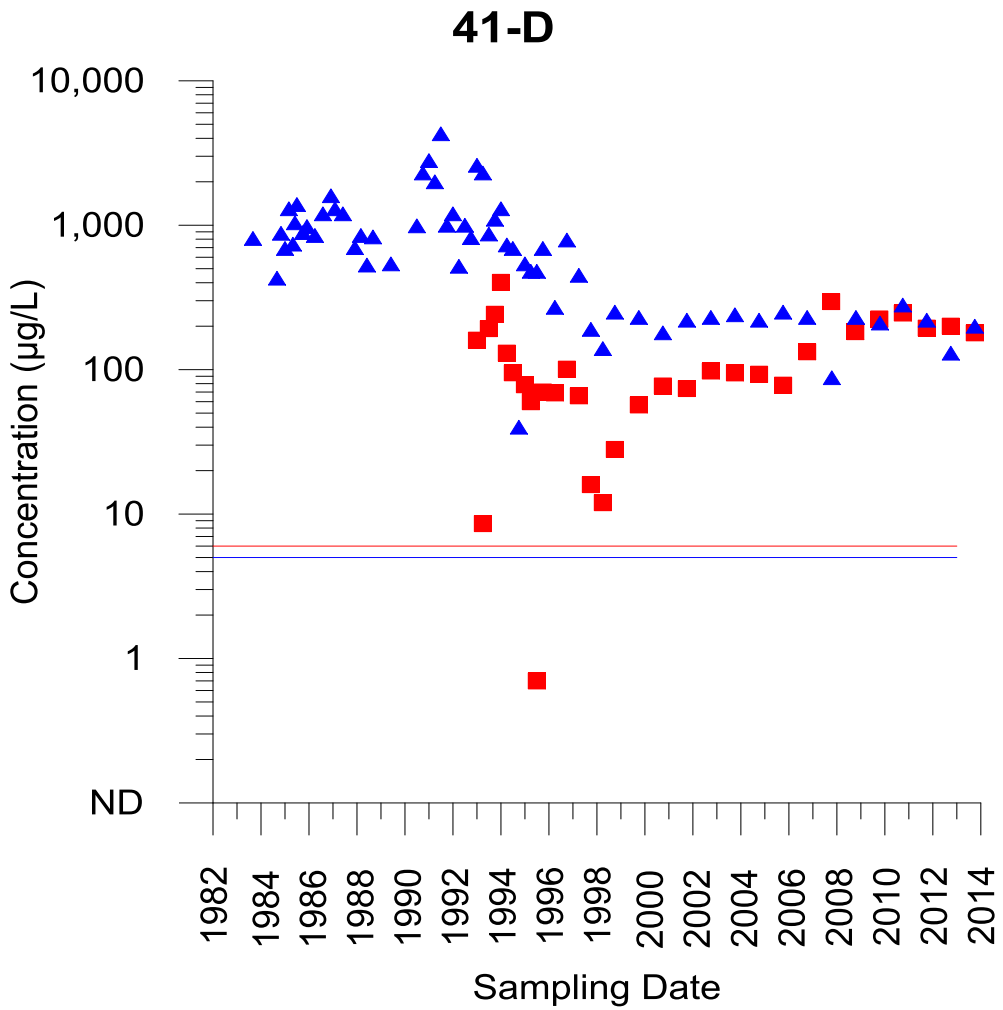
CONCENTRATION TRENDS FOR WELL 40-D

JANUARY 2014

FIGURE D-15



EXPLANATION

TCE
cDCE
Cleanup Goal for TCE
Cleanup Goal for cDCE

ABBREVIATIONS

TCE = trichloroethene
cDCE = cis-1,2-dichloroethene

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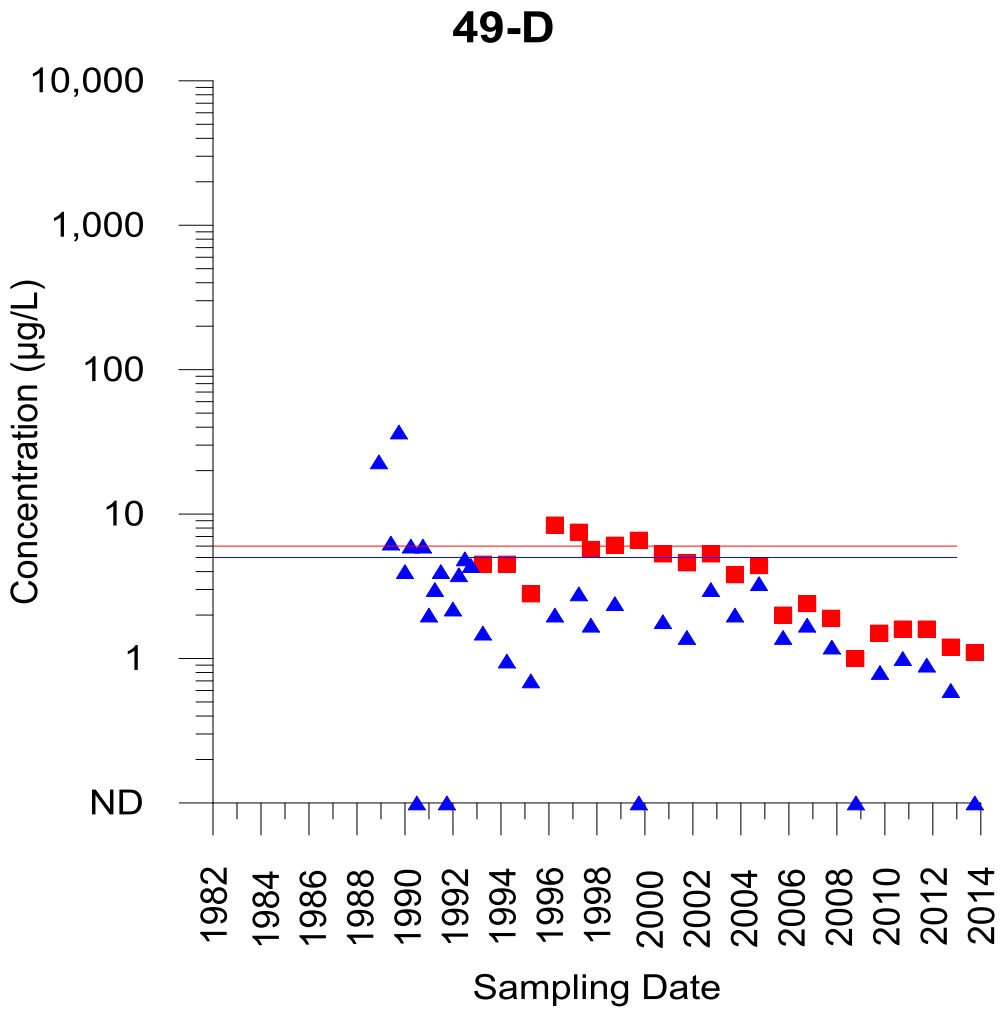
CONCENTRATION TRENDS FOR WELL 41-D

JANUARY 2014

FIGURE D-16



EXPLANATION

TCE
cDCE
Cleanup Goal for TCE
Cleanup Goal for cDCE

ABBREVIATIONS

TCE = trichloroethene
cDCE = cis-1,2-dichloroethene

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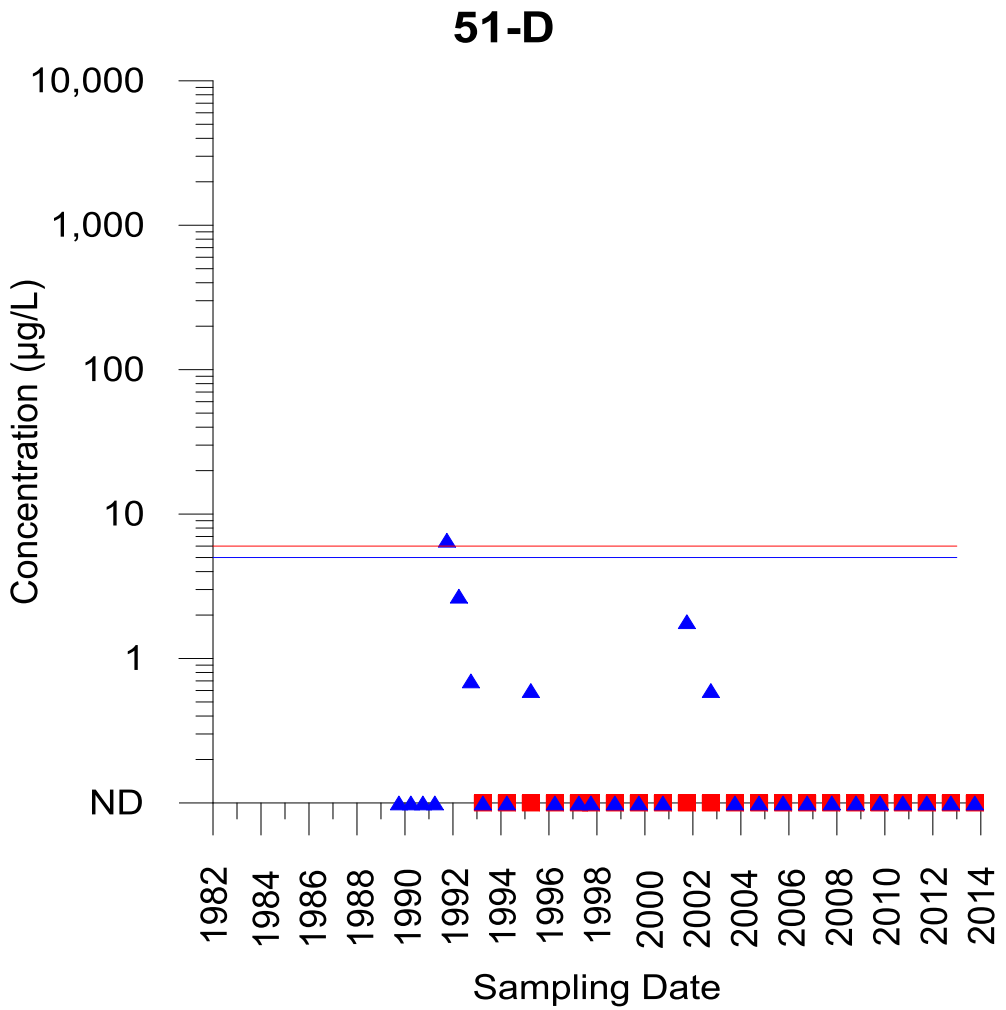
CONCENTRATION TRENDS FOR WELL 49-D

JANUARY 2014

FIGURE D-17



EXPLANATION

TCE
cDCE
Cleanup Goal for TCE
Cleanup Goal for cDCE

ABBREVIATIONS

TCE = trichloroethene
cDCE = cis-1,2-dichloroethene

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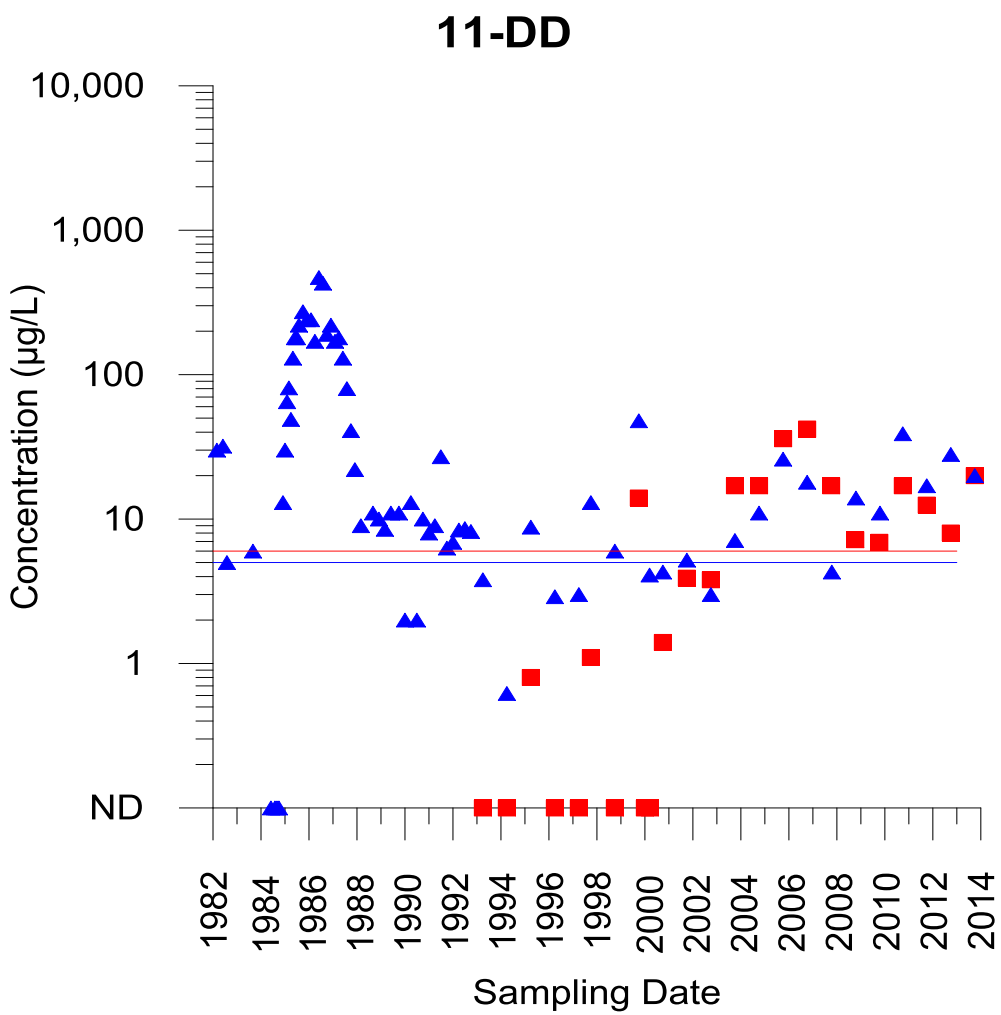
CONCENTRATION TRENDS FOR WELL 51-D

JANUARY 2014

FIGURE D-18



EXPLANATION

TCE
cDCE
Cleanup Goal for TCE
Cleanup Goal for cDCE

ABBREVIATIONS

TCE = trichloroethene
cDCE = cis-1,2-dichloroethene

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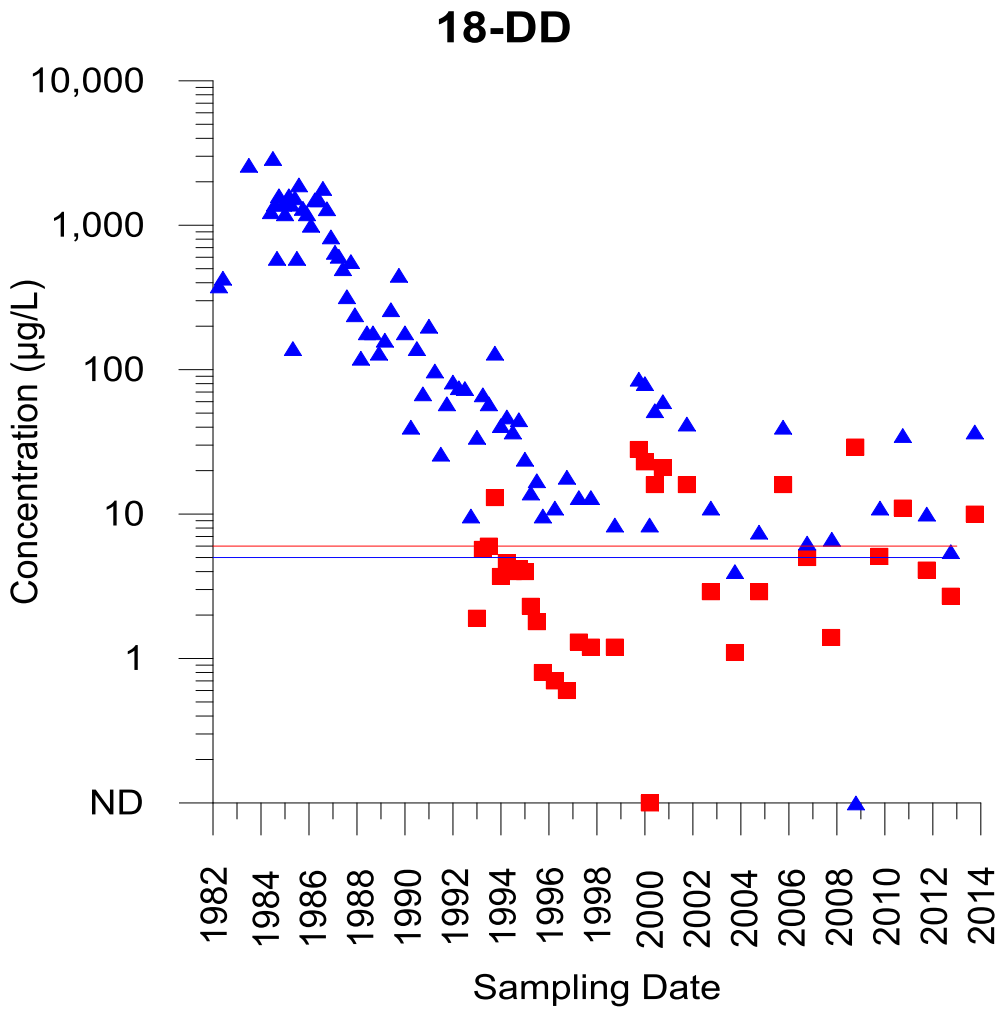
CONCENTRATION TRENDS FOR WELL 11-DD

JANUARY 2014

FIGURE D-19



EXPLANATION

TCE
cDCE
Cleanup Goal for TCE
Cleanup Goal for cDCE

ABBREVIATIONS

TCE = trichloroethene
cDCE = cis-1,2-dichloroethene

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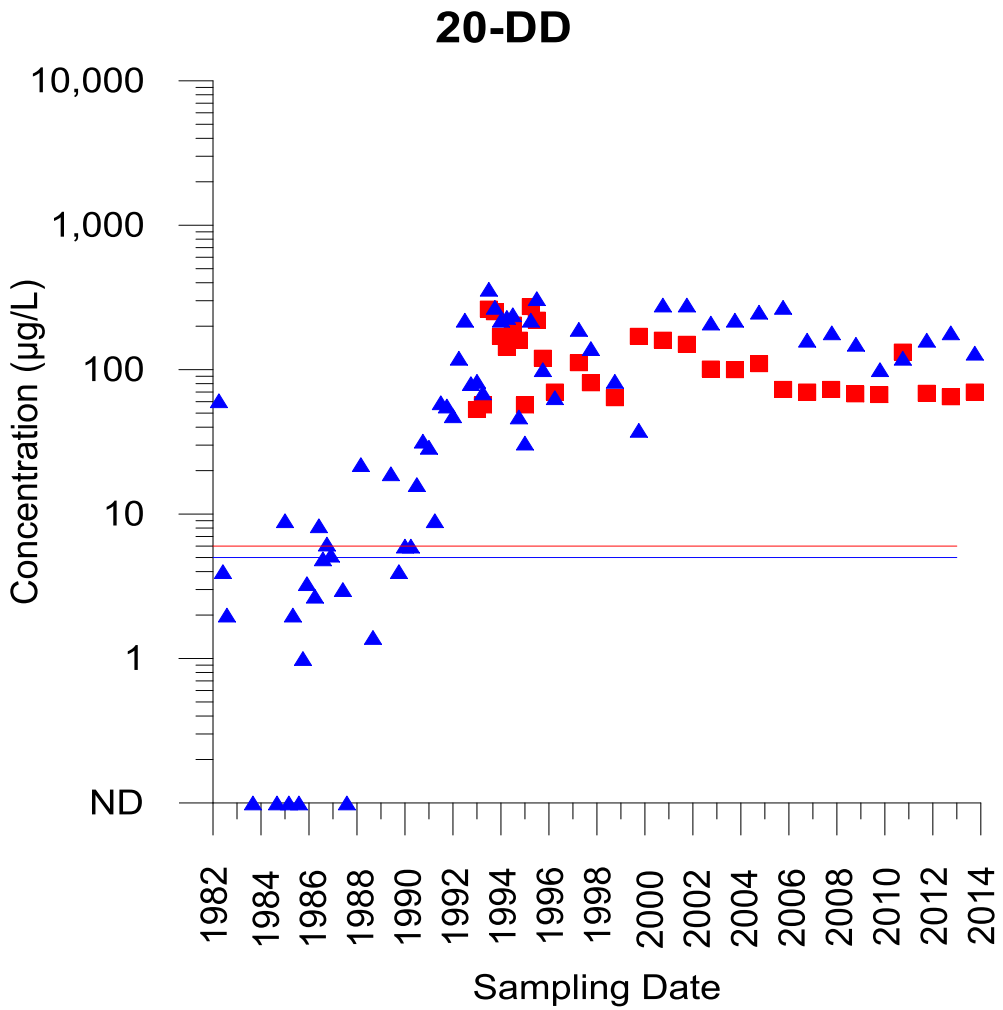
CONCENTRATION TRENDS FOR WELL 18-DD

JANUARY 2014

FIGURE D-20



EXPLANATION

TCE
cDCE
Cleanup Goal for TCE
Cleanup Goal for cDCE

ABBREVIATIONS

TCE = trichloroethene
cDCE = cis-1,2-dichloroethene

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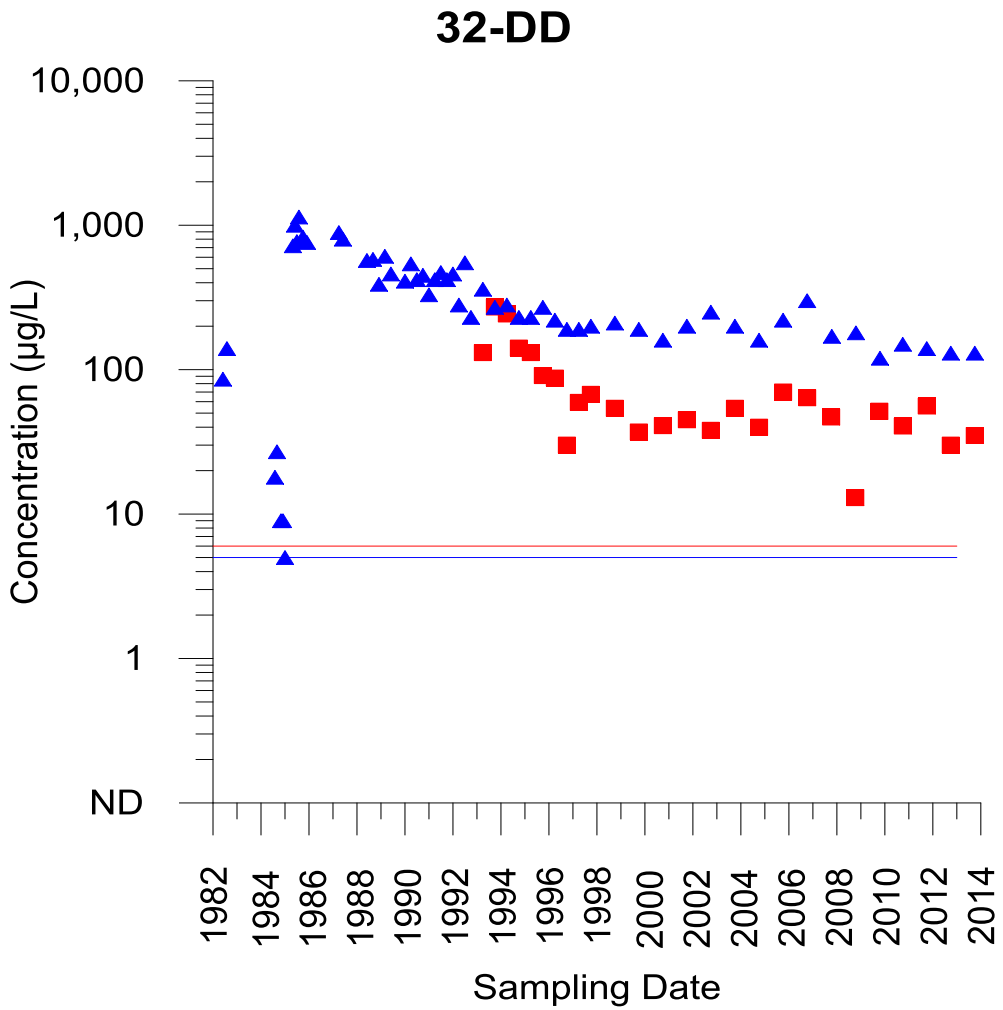
CONCENTRATION TRENDS FOR WELL 20-DD

JANUARY 2014

FIGURE D-21



EXPLANATION

TCE
cDCE
Cleanup Goal for TCE
Cleanup Goal for cDCE

ABBREVIATIONS

TCE = trichloroethene
cDCE = cis-1,2-dichloroethene

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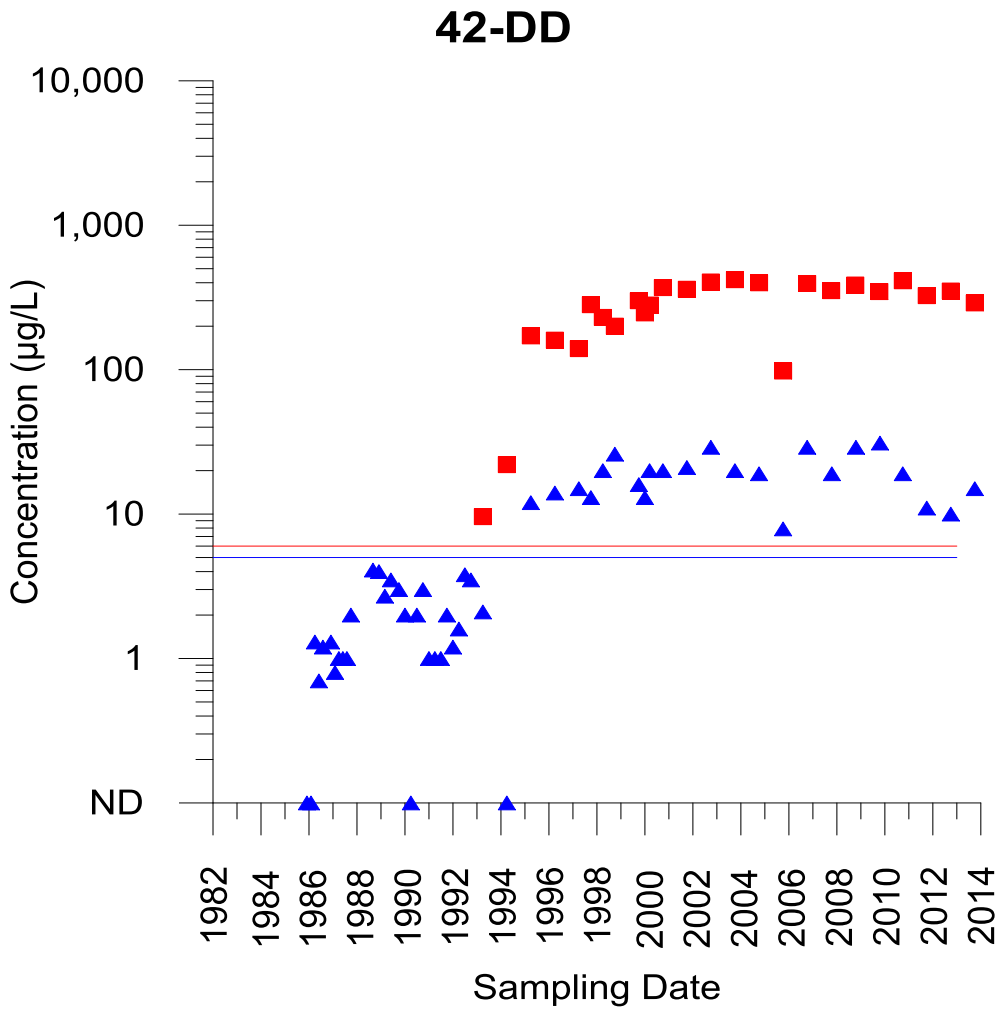
CONCENTRATION TRENDS FOR WELL 32-DD

JANUARY 2014

FIGURE D-22



EXPLANATION

TCE
cDCE
Cleanup Goal for TCE
Cleanup Goal for cDCE

ABBREVIATIONS

TCE = trichloroethene
cDCE = cis-1,2-dichloroethene

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CONCENTRATION TRENDS FOR WELL 42-DD

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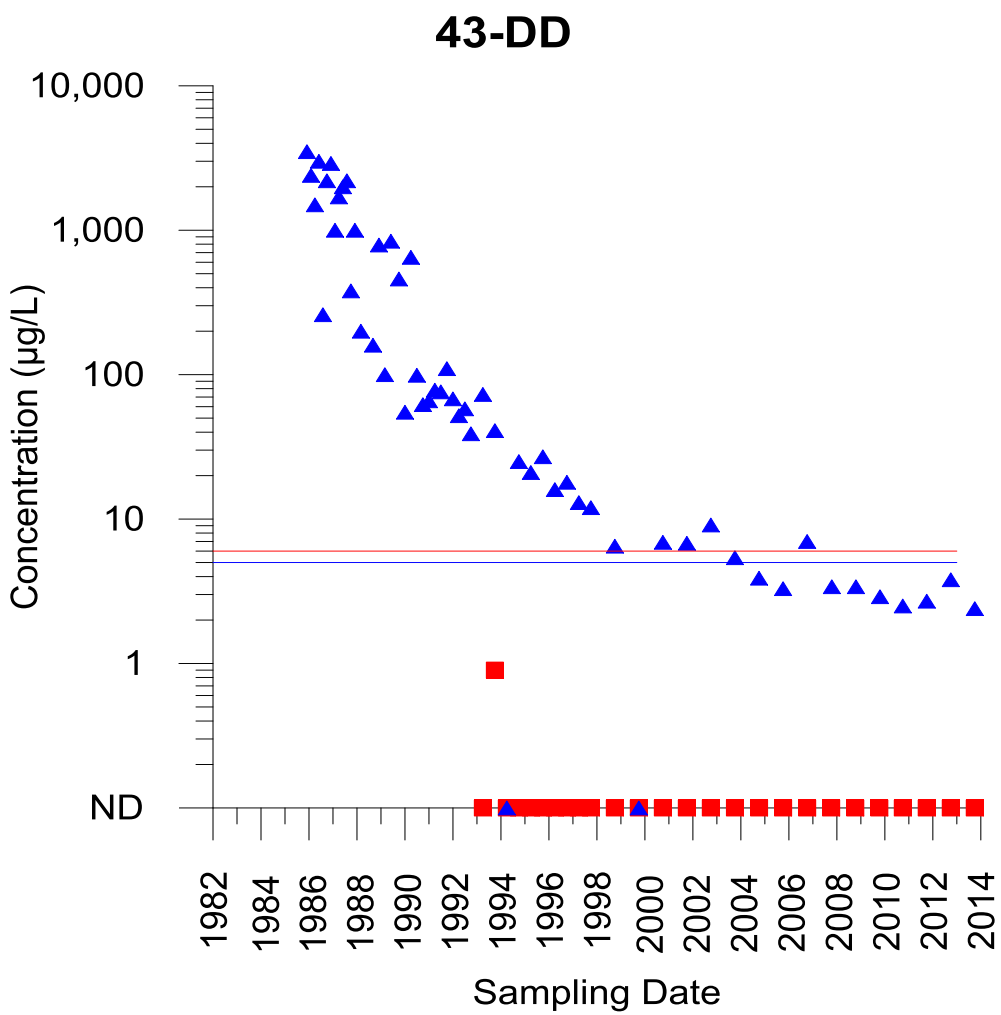
FIGURE D-23



EXPLANATION

TCE
cDCE
Cleanup Goal for TCE
Cleanup Goal for cDCE

ABBREVIATIONS

TCE = trichloroethene
cDCE = cis-1,2-dichloroethene

HALEY & ALDRICH

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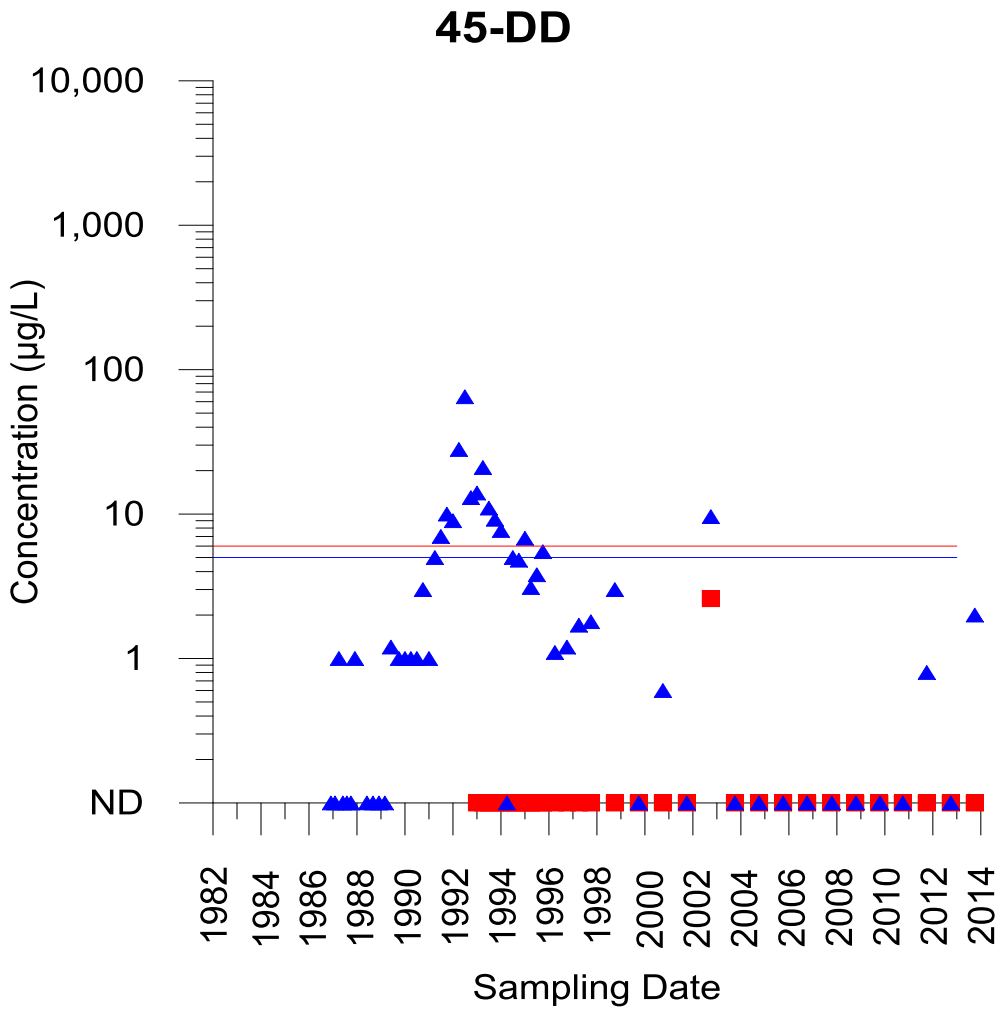
SUNNYVALE, CALIFORNIA

CONCENTRATION TRENDS FOR WELL 43-DD

JANUARY 2014

FIGURE D-24



EXPLANATION

TCE
cDCE
Cleanup Goal for TCE
Cleanup Goal for cDCE

ABBREVIATIONS

TCE = trichloroethene
cDCE = cis-1,2-dichloroethene

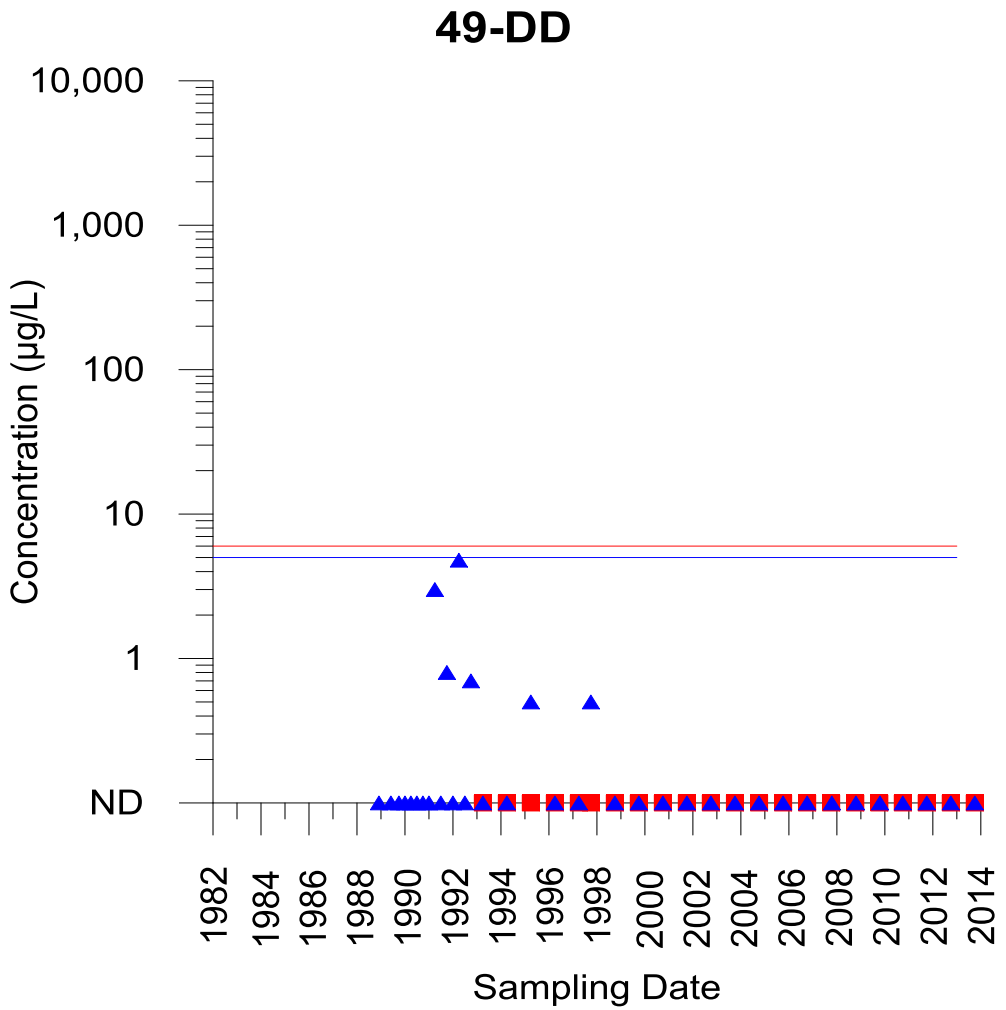
HALEY & ALDRICH

915 DEGUIGNE DRIVE
SUNNYVALE, CALIFORNIA

CONCENTRATION TRENDS FOR WELL 45-DD

JANUARY 2014

FIGURE D-25



EXPLANATION

TCE
cDCE
Cleanup Goal for TCE
Cleanup Goal for cDCE

ABBREVIATIONS

TCE = trichloroethene
cDCE = cis-1,2-dichloroethene

HALEY & ALDRICH

915 DEGUIGNE DRIVE
SUNNYVALE, CALIFORNIA

CONCENTRATION TRENDS FOR WELL 49-DD

JANUARY 2014

FIGURE D-26